## **SIEMENS**

Data sheet 3RT2025-1BB40



power contactor, AC-3 17 A, 7.5 kW / 400 V 1 NO + 1 NC, 24 V DC 3-pole, Size S0 screw terminal

product designation Power contactor product type designation 3RT2  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 and the shock resistance at rectangular impulse • at DC  shock resistance with sine pulse • at DC  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 fypical  reference code acc. to IEC 81346-2  Amblent conditions installation altitude at height above sea level maximum • ambient temperature during storage  • of ond notacts for main current circuit number of poles for main current circuit number of poles for main current circuit number of Pole auxiliary voltage at AC-3 rated value maximum  • operational current  • operating voltage at AC-3 rated value maximum  operational current  • operating voltage at AC-3 rated value maximum  operational current  • operating voltage at AC-3 rated value maximum  operational current  • operating voltage at AC-3 rated value maximum  operational current	product brand name	SIRIUS	
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 and for auxiliary circuit rated value • of auxiliary circuit rated value • of auxiliary circuit rated value • of suxiliary circuit rated value • of suxiliary circuit rated value and for auxiliary circuit rated value  • of auxiliary circuit rated value • of suxiliary circuit rated value  • at DC  shock resistance at rectangular impulse • at DC  shock resistance with sine pulse • at DC  shock resistance at rectangular impulse • at DC  shock resistance at rectangular impulse • at DC  shock resistance with sine pulse • at DC  shock resistance at rectangular impulse  shock resista	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 DC  shock resistance at rectangular impulse • at DC  shock resistance with sine pulse • at DC  shock resistance • at DC  shock re	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 work resistance at rectangular impulse • at DC  shock resistance with sine pulse • at DC  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  • operating voltage at AC-3 rated value maximum • operating voltage at AC-3 rated value maximum  • operating voltage at AC-3 rated value maximum  690 ∨	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 political rated value • of auxiliary circuit rated value • of auxiliary switch sine pulse • at DC  shock resistance with sine pulse • at DC  shock resistance with sine pulse • at DC  shock resistance with sine pulse • 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 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	size of contactor	S0	
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 at DC shock resistance at rectangular impulse at DC shock resistance with sine pulse at DC shock resistance with sine pulse 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 and the properties of the contacts for main current circuit number of poles for main current circuit number of poles for main current circuit number of NO contacts for main current circuit number of NO contacts for main current circuit number of NO contacts for main current of the current without load of the current at AC in hot operating voltage at AC-3 rated value maximum  2.7 W  5.9 W  6 kV  6 kV  400 V  7 Sys / 10 ms  10 000 000  10 000 000  10 000 000  10 000 00	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  maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1  shock resistance at rectangular impulse  • at DC  shock resistance with sine pulse  • at DC  shock resistance 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  • operating voltage at AC-3 rated value maximum  2 000 V	<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 auxiliary circuit rated value  of kV  maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1  shock resistance at rectangular impulse  of at DC  shock resistance with sine pulse  of the Contactor 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  10 000 000  10 000 000  10 000 000  10 000 00		2.7 W	
Surge voltage resistance   of main circuit rated value   6 kV   of auxiliary circuit rated value   6 kV   waximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1   shock resistance at rectangular impulse   of at DC   10g / 5 ms, 7,5g / 10 ms   10g / 5 ms, 7,5g / 10 ms   10g / 5 ms, 10g	• per pole	0.9 W	
of main circuit rated value     of auxiliary circuit rated value     aximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1      shock resistance at rectangular impulse     o at DC	power loss [W] for rated value of the current without load current share typical	5.9 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	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 DC  shock resistance with sine pulse • at DC  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  400 V  10 V  400 V  400 V  400 V  10g / 5 ms, 7,5g / 10 ms  15g / 5 ms, 10g / 10 ms  10 000 000  10 000 000  10 000 000  10 000 00		6 kV	
shock resistance at rectangular impulse  • at DC  shock resistance with sine pulse  15g / 5 ms, 10g / 10 ms  10 000 000  5 000 000  10 000 000  10 000 000  10 000 00	·	6 kV	
• at DC  shock resistance with sine pulse • at DC  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  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  5 000 000  10 000 000  10 000 000  5 000 000  10 000 000  10 000 000  5 000 000  10 000 000  10 000 000  5 000 000  10 000 000  10 000 000  5 000 000  10 000 000  10 000 000  10 000 00		400 V	
shock resistance with sine pulse  • at DC  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  • 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  15g / 5 ms, 10g / 10 ms  10 000 000  10 000 000  10 000 000  10 000 00	shock resistance at rectangular impulse		
at DC  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 NO contacts 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 DC	10g / 5 ms, 7,5g / 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  • 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	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>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>ambient temperature during storage</li> <li>-25 +60 °C</li> <li>ambient temperature during storage</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>5 000 000</li> <li>10 000 00</li> <li>10 000</li></ul>	• at DC	15g / 5 ms, 10g / 10 ms	
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     o ambient temperature during operation     o 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  5 000 000  10 000 000  10 000 000  10 000 00	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 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	, ·	10 000 000	
reference code acc. to IEC 81346-2 Q  Ambient conditions installation altitude at height above sea level maximum 2 000 m  • ambient temperature during operation -25 +60 °C • 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		5 000 000	
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  a operating voltage at AC-3 rated value maximum  690 V		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>-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>	Ambient conditions		
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	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	<ul> <li>ambient temperature during storage</li> </ul>	-55 +80 °C	
number of NO contacts for main contacts     3       ● 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	
., 5	number of NO contacts for main contacts	3	
	<ul> <li>operating voltage at AC-3 rated value maximum</li> </ul>	690 V	

<ul> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> <li>at AC-1</li> </ul>	40 A
— up to 690 V at ambient temperature 40 $^{\circ}\text{C}$ rated value	40 A
<ul> <li>up to 690 V at ambient temperature 60 °C rated value</li> </ul>	35 A
• at AC-3	
— at 400 V rated value	17 A
— at 500 V rated value	17 A
— at 690 V rated value	13 A
at AC-4 at 400 V rated value	15.5 A
• at AC-5a up to 690 V rated value	35.2 A
at AC-5b up to 400 V rated value	14.1 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated value	11.4 A
— up to 400 V for current peak value n=20 rated value	11.4 A
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	11.4 A
<ul> <li>up to 690 V for current peak value n=20 rated value</li> <li>at AC-6a</li> </ul>	11.3 A
— up to 230 V for current peak value n=30 rated value	7.6 A
<ul> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	7.6 A
<ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	7.6 A
<ul> <li>up to 690 V for current peak value n=30 rated value</li> </ul>	7.6 A
14.40	
minimum cross-section in main circuit at maximum AC-1 rated value	10 mm²
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating cycles at AC-4	
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value	7.7 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value  • at 690 V rated value	
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current	7.7 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value  • at 690 V rated value  operational current  • at 1 current path at DC-1	7.7 A 7.7 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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	7.7 A 7.7 A 35 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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	7.7 A 7.7 A 35 A 4.5 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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	7.7 A 7.7 A 35 A 4.5 A 1 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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	7.7 A 7.7 A 35 A 4.5 A 1 A 0.4 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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  — at 600 V rated value	7.7 A 7.7 A 35 A 4.5 A 1 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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	7.7 A 7.7 A 35 A 4.5 A 1 A 0.4 A 0.25 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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	7.7 A 7.7 A 35 A 4.5 A 1 A 0.4 A 0.25 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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 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  • with 2 rated value  • with 2 current paths in series at DC-1  — at 24 V rated value  — at 110 V rated value	7.7 A 7.7 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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 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  • with 2 current paths in series at DC-1  — at 24 V rated value  — at 220 V rated value  — at 220 V rated value  — at 220 V rated value	7.7 A 7.7 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 5 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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  • with 2 current paths in series at DC-1  — at 24 V rated value  — at 110 V rated value  — at 120 V rated value  — at 440 V rated value	7.7 A 7.7 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 36 A 37 A 38 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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 220 V rated value  — at 24 V rated value  — at 24 V rated value  — at 440 V rated value  — at 140 V rated value  — at 110 V rated value  — at 440 V rated value  — at 600 V rated value  — at 600 V rated value	7.7 A 7.7 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 5 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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	7.7 A 7.7 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 35 A 4.5 A 1 A 0.8 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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 140 V rated value  — at 600 V rated value  — at 600 V rated value  — at 440 V rated value  — at 440 V rated value  — at 220 V rated value  — at 240 V rated value  — at 240 V rated value  — at 600 V rated value  • with 3 current paths in series at DC-1  — at 24 V rated value	7.7 A 7.7 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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 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  • with 3 current paths in series at DC-1  — at 24 V rated value  — at 440 V rated value  — at 4500 V rated value  — at 440 V rated value	7.7 A 7.7 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 36 A 1 A 0.8 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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 110 V rated value  — at 220 V rated value  — at 24 V rated value  — at 440 V rated value  — at 24 V rated value  — at 600 V rated value  — at 24 V rated value  • with 3 current paths in series at DC-1  — at 24 V rated value  — at 25 V rated value  — at 27 V rated value  — at 28 V rated value  — at 29 V rated value  — at 20 V rated value  — at 210 V rated value  — at 210 V rated value	7.7 A 7.7 A 7.7 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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 110 V rated value  — at 220 V rated value  — at 220 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  • 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 24 V rated value  — at 24 V rated value  — at 250 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	7.7 A 7.7 A 7.7 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 35 A 35 A 2.9 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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 110 V rated value  — at 220 V rated value  — at 220 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 24 V rated value  — at 24 V rated value  — at 24 V rated value  — at 440 V rated value	7.7 A 7.7 A 7.7 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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 110 V rated value  — at 220 V rated value  — at 24 V rated value  — at 220 V rated value  — at 220 V rated value  — at 440 V rated value  — at 440 V rated value  — at 440 V rated value  — at 220 V rated value  — at 24 V rated value  — at 440 V rated value  — at 440 V rated value  — at 440 V rated value  — at 600 V rated value	7.7 A 7.7 A 7.7 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 35 A 35 A 2.9 A
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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 110 V rated value  — at 220 V rated value  — at 24 V rated value  — at 24 V rated value  — at 24 V rated value  — at 220 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  — at 440 V rated value  — at 440 V rated value  — at 110 V rated value  — at 110 V rated value  — at 440 V rated value  — at 600 V rated value	7.7 A 7.7 A 7.7 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 3
minimum cross-section in main circuit at maximum AC-1 rated value  operational current for approx. 200000 operating 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 110 V rated value  — at 220 V rated value  — at 24 V rated value  — at 220 V rated value  — at 220 V rated value  — at 440 V rated value  — at 440 V rated value  — at 440 V rated value  — at 220 V rated value  — at 24 V rated value  — at 440 V rated value  — at 440 V rated value  — at 440 V rated value  — at 600 V rated value	7.7 A 7.7 A 7.7 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 35 A 35 A 2.9 A



Control circuit/ Control	
	300 1/11
• at AC-4 maximum	300 1/h
• at AC-2 maximum • at AC-3 maximum	1 000 1/h
• at AC-2 maximum	1 000 1/h
• at AC-1 maximum	1 000 1/h
at DC     operating frequency	1 300 1/11
no-load switching frequency	1 500 1/h
limited to 60 s switching at zero current maximum  policial switching frequency	90 A, Ose minimum cross-section acc. to AC-1 rated value
-	115 A; Use minimum cross-section acc. to AC-1 rated value 96 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> <li>limited to 30 s switching at zero current maximum</li> </ul>	180 A; Use minimum cross-section acc. to AC-1 rated value
limited to 5 s switching at zero current maximum     limited to 10 s switching at zero current maximum	225 A; Use minimum cross-section acc. to AC-1 rated value
limited to 1 s switching at zero current maximum     limited to 5 s switching at zero current maximum	225 A; Use minimum cross-section acc. to AC-1 rated value
up to 40 °C	225 At Lieu minimum group postion and to AC 4 retail value
short-time withstand current in cold operating state	
• up to 690 V for current peak value n=30 rated value	9.1 kV·A
• up to 500 V for current peak value n=30 rated value	6.6 kV·A
up to 400 V for current peak value n=30 rated value	5.2 kV·A
• up to 230 V for current peak value n=30 rated value	3 kV·A
operating apparent power at AC-6a	
• up to 690 V for current peak value n=20 rated value	13.6 kV·A
• up to 500 V for current peak value n=20 rated value	9.9 kV·A
• up to 400 V for current peak value n=20 rated value	7.8 kV·A
• up to 230 V for current peak value n=20 rated value	4.5 kV·A
operating apparent power at AC-6a	
at 690 V rated value	6 kW
• at 400 V rated value	3.5 kW
at AC-4	
operating power for approx. 200000 operating cycles	
— at 690 V rated value	11 kW
— at 500 V rated value	7.5 kW
— at 400 V rated value	7.5 kW
— at 230 V rated value	4 kW
• at AC-3	
operating power	
— at 600 V rated value	0.6 A
— at 440 V rated value	0.6 A
— at 220 V rated value	10 A
— at 110 V rated value	35 A
— at 24 V rated value	35 A
with 3 current paths in series at DC-3 at DC-5	V.107.
— at 600 V rated value	0.16 A
— at 440 V rated value	0.27 A
— at 220 V rated value	3 A
— at 110 V rated value	15 A
— at 24 V rated value	35 A
with 2 current paths in series at DC-3 at DC-5	
— at 600 V rated value	0.06 A
— at 440 V rated value	0.09 A
	1 A



closing delay	
• at DC	50 170 ms
opening delay  ● at DC	15 17.5 ms
arcing time	10 10 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts	1
instantaneous contact	
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-15	
at 230 V rated value	10 A
at 400 V rated value	3 A
at 500 V rated value	2 A
at 690 V rated value	1 A
operational current at DC-12	
at 24 V rated value	10 A
• at 48 V rated value	6 A
at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 125 V rated value	2 A
at 220 V rated value	1 A
at 600 V rated value	0.15 A
operational current at DC-13	40.4
• 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  1 foulty quitabing per 100 million (47.1/. 1 mA)
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	44.0
at 480 V rated value	14 A
at 600 V rated value	17 A
yielded mechanical performance [hp]	
for single-phase AC motor     at 110/130 V reted value	1 ha
— at 110/120 V rated value	1 hp
— at 230 V rated value	3 hp
<ul><li>for 3-phase AC motor</li><li>— at 200/208 V rated value</li></ul>	3 hp
	·
— at 220/230 V rated value	5 hp
— at 460/480 V rated value — at 575/600 V rated value	10 hp 15 hp
contact rating of auxiliary contacts according to UL	A600 / P600
	A00071 000
Short-circuit protection	
design of the fuse link	
for short-circuit protection of the main circuit     with type of coordination 1 required	aC: 634 (600)/ 100k4) aM: 324 (600)/ 100k4) BC00: 624 (415)/ 00k4)
with type of coordination 1 required	gG: 63A (690V,100kA), aM: 32A (690V,100kA), BS88: 63A (415V,80kA)
<ul> <li>with type of assignment 2 required</li> <li>for short-circuit protection of the auxiliary switch</li> </ul>	gG: 25A (690V,100kA), aM: 20A (690V,100kA), BS88: 25A (415V,80kA) gG: 10 A (500 V, 1 kA)
required	90. 1071 (000 V, 1101)
Installation/ mounting/ dimensions	
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail
	22.2. Sind on the or mounting of the oo film old industry industry indi



	according to DIN EN 60715
side-by-side mounting	Yes
height	85 mm
width	45 mm
depth	107 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
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	screw-type terminals
<ul> <li>for auxiliary and control circuit</li> </ul>	screw-type terminals
<ul> <li>at contactor for auxiliary contacts</li> </ul>	Screw-type terminals
<ul><li>of magnet coil</li></ul>	Screw-type terminals
type of connectable conductor cross-sections	
<ul> <li>for main contacts</li> </ul>	
— solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)
<ul><li>— solid or stranded</li></ul>	2x (1 2,5 mm²), 2x (2,5 10 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	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	
• solid	1 10 mm²
• stranded	1 10 mm²
finely stranded with core end processing	1 10 mm²
connectable conductor cross-section for auxiliary contacts	
solid or stranded	0.5 2.5 mm <sup>2</sup>
finely stranded with core end processing	0.5 2.5 mm <sup>2</sup>
type of connectable conductor cross-sections	0.0 2.0
• for auxiliary contacts	
— solid or stranded	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)
finely stranded with core end processing	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
at AWG cables for auxiliary contacts	2x (20 16), 2x (18 14)
AWG number as coded connectable conductor cross section for main contacts	16 8
AWG number as coded connectable conductor	20 14
cross section for auxiliary contacts Safety related data	
	1,000,000
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	40.94
	40 %
with high demand rate acc. to SN 31920  failure rate (ELT) with law 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
Third contact acc. to ILO 00077-4-1	100



20 y T1 value for proof test interval or service life acc. to **IEC 61508** 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

Certificates/ approvals

**General Product Approval** 

**EMC** 













**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping

**Miscellaneous** 



Type Test Certificates/Test Report

**Special Test** Certificate

**Miscellaneous** 



Marine / Shipping











Confirmation

other

other



## **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=3RT2025-1BB40

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2025-1BB40

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2025-1BB40

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

 $\underline{\text{http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2025-1BB40\&lang=en}}$ 

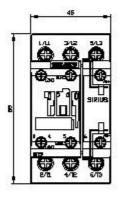
Characteristic: Tripping characteristics, I2t, Let-through current

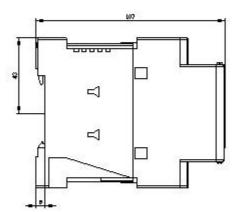
https://support.industry.siemens.com/cs/ww/en/ps/3RT2025-1BB40/char

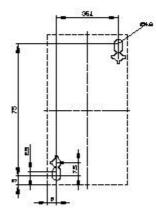
Further characteristics (e.g. electrical endurance, switching frequency)

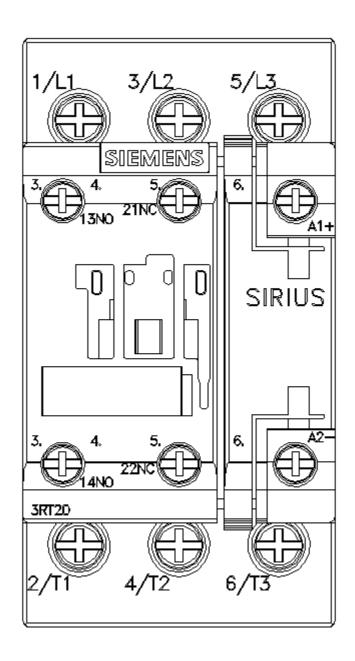
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2025-1BB40&objecttype=14&gridview=view1

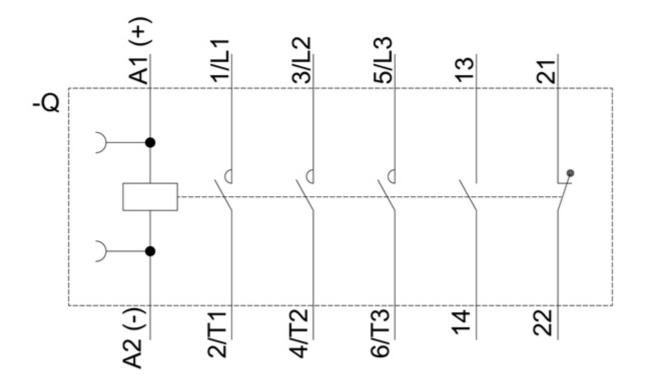












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