## SIEMENS

## Data sheet

## 3RT2025-1BJ80



power contactor, AC-3e/AC-3, 17 A, 7.5 kW / 400 V, 3-pole, 72 V DC, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S0

product brand name         SIRIUS           product vipe designation         Power contactor           optiduct type designation         SR12           General technical data         S0           size of contactor         No           of unction module for communication         No           auxiliary switch         Yes           optiduct extension         1.8 W           at AC in hot operating state         1.8 W           at AC in hot operating state per pole         0.6 W           of main circuit with degree of pollution 3 rated value         690 V           of main circuit with degree of pollution 3 rated value         690 V           of main circuit with degree of pollution 3 rated value         690 V           of auxiliary circuit with degree of pollution 3 rated value         690 V           of auxiliary circuit rated value         6 kV           of auxiliary circuit rated value         6 kV           or auxiliary circuit rated value         100 00 000	6/13	
product type designation         3RT2           General technical data	product brand name	SIRIUS
General technical data         S0           size of contactor         S0           product extension         No           • function module for communication         No           • auxiliary switch         Yes           power loss [W] for rated value of the current         1.8 W           • at AC in hot operating state         1.8 W           • at AC in hot operating state         5.9 W           insulation voltage         690 V           • of main circuit with degree of pollution 3 rated value         690 V           • of auxiliary circuit with degree of pollution 3 rated value         690 V           • of auxiliary circuit with degree of pollution 3 rated value         690 V           • of auxiliary circuit rated value         6 kV           • of contactor scitas according to EN 60947-1         400 V           sthock resistance with sine pulse         10g / 5 ms, 7,5g / 10 ms           • at DC         10g / 5 ms, 7,5g / 10 ms           shock resistance with sine pulse         10000 000           • of the contactor with added auxiliary swi	product designation	Power contactor
size of contactor     S0       product extension     No       • function module for communication     No       • auxiliary switch     Yes       power loss [W] for rated value of the current     1.8 W       • at AC in hot operating state per pole     0.6 W       • without load current share typical     5.9 W       Insulation voltage     690 V       • of main circuit with degree of pollution 3 rated value     690 V       • of auxiliary circuit with degree of pollution 3 rated value     690 V       • of auxiliary circuit with degree of pollution 3 rated value     680 V       surge voltage resistance     6kV       • of auxiliary circuit rated value     6 kV       • of auxiliary surverb holes for protective separation between     10g / 5 ms, 7,5g / 10 ms       shock resistance with sine pulse     10g / 5 ms, 7,5g / 10 ms       • at DC     15g / 5 ms, 10g / 10 ms       mechanical service life (operating cycles)     10 000 000       • of the contactor with added electronically optimized auxiliary switch block typical     10 000 000       reference code according to IEC 81346-2     Q       Substance Prohibi	product type designation	3RT2
product extension         No           • function module for communication         No           • auxiliary switch         Yes           • auxiliary switch         Yes           • at AC in hot operating state         1.8 W           • at AC in hot operating state pole         0.6 W           • without load current share typical         5.9 W           Insulation voltage         690 V           • of main circuit with degree of pollution 3 rated value         690 V           • of auxiliary circuit with degree of pollution 3 rated value         690 V           • of auxiliary circuit with degree of pollution 3 rated value         64 V           • of main circuit rated value         6 kV           • of main circuit rated value         6 kV           • of main circuit rated value         6 kV           • of auxiliary circuit rated value         1000 V           • al DC         10g / 5 ms, 7.5g / 10 ms <tr< th=""><th>General technical data</th><th></th></tr<>	General technical data	
• function module for communicationNo• auxiliary switchYespower loss [W] for rated value of the current	size of contactor	SO
• auxiliary switchYespower loss [W] for rated value of the current	product extension	
power loss [W] for rated value of the current	<ul> <li>function module for communication</li> </ul>	No
• at AC in hot operating state per pole1.8 W• at AC in hot operating state per pole0.6 W• without load current share typical0.6 W• of main circuit with degree of pollution 3 rated value690 V• of main circuit rated value68 V• of main circuit rated value6 kV• of main circuit rated value6 kV• of auxiliary circuit rated value6 kV• of main circuit rated value6 kV• of auxiliary circuit rated value6 kV• of contactor typical100 V• at DC10g / 5 ms, 7,5g / 10 ms• of contactor typical10 000 000• of the contactor with added electronically optimized auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical1001/2009Aubient conditions2000 mambient conditions-55 +60 °C• of uning storage-55 +60 °C <th>auxiliary switch</th> <th>Yes</th>	auxiliary switch	Yes
• at AC in hot operating state per pole0.6 W• without load current share typical5.9 Winsulation voltage690 V• of main circuit with degree of pollution 3 rated value690 V• of main circuit with degree of pollution 3 rated value690 V• of main circuit rated value690 V• of main circuit rated value690 V• of auxiliary circuit rated value64 V• of auxiliary circuit rated value690 V• of auxiliary circuit rated value64 V• of auxiliary circuit rated value64 V• of auxiliary circuit rated value64 V• of auxiliary circuit rated value100 V• ot DC10g / 5 ms, 7,5g / 10 msshock resistance with sine pulse10 000 000• of the contactor with added electronically optimized auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical10 000 000• of uning operation200 mambient conditions2 000 m• uning operation-25 +60 °C• during storage<	power loss [W] for rated value of the current	
without load current share typical     without load current share typical     without load current share typical     if sullation voltage     of main circuit with degree of pollution 3 rated value     of auxiliary circuit with degree of pollution 3 rated value     of auxiliary circuit with degree of pollution 3 rated value     of auxiliary circuit with degree of pollution 3 rated value     of auxiliary circuit with degree of pollution 3 rated value     of auxiliary circuit with degree of pollution 3 rated value     of auxiliary circuit with degree of pollution 3 rated value     of auxiliary circuit rated value     of auxiliary contrated value     of auxiliary service bioperton     auxiliary service bioperton     of contactor 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 auxiliary switch block typical     of 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 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 typical	<ul> <li>at AC in hot operating state</li> </ul>	1.8 W
insulation voltage       690 V         of main circuit with degree of pollution 3 rated value       690 V         of auxiliary circuit with degree of pollution 3 rated value       690 V         surge voltage resistance       690 V         of main circuit rated value       6 kV         of auxiliary circuit rated value       6 kV         auxiliary circuit rated value       6 kV         of auxiliary circuit rated value       6 kV         auxiliary circuit rated value       6 kV         auxiliary circuit rated value       6 kV         at DC       100 V         shock resistance with sine pulse       10 g/ 5 ms, 7,5g / 10 ms         of contactor typical       10 000 000         auxiliary switch block typical       10 000 000         of the contactor with added auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2009         Ambient temperature       -25 +60 °C <th><ul> <li>at AC in hot operating state per pole</li> </ul></th> <th>0.6 W</th>	<ul> <li>at AC in hot operating state per pole</li> </ul>	0.6 W
• of main circuit with degree of pollution 3 rated value690 V• of auxiliary circuit with degree of pollution 3 rated value690 V• surge voltage resistance•• of main circuit rated value6 kV• of auxiliary circuit rated value6 kV• of auxiliary circuit rated value6 kV• of auxiliary circuit rated value6 kVmaximum permissible voltage for protective separation between coll and main contacts according to EN 60947-1400 V• shock resistance at rectangular impulse • at DC10g / 5 ms, 7,5g / 10 ms• at DC10g / 5 ms, 7,5g / 10 ms• of contactor typical10 000 000• of contactor typical10 000 000• of the contactor with added electronically optimized auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical2000 m• of the contactor with added auxiliary switch block typical2000 m• of the contactor with added auxiliary switch block typical2000 m• of the contactor with added auxiliary switch block typical2000 m• of the contactor with added auxiliary switch block typical2000 m• of the contactor with addeelectory <th><ul> <li>without load current share typical</li> </ul></th> <th>5.9 W</th>	<ul> <li>without load current share typical</li> </ul>	5.9 W
of auxiliary circuit with degree of pollution 3 rated value690 Vsurge voltage resistance-of main circuit rated value6 kVof main circuit rated value6 kVof auxiliary circuit rated value6 kVcol auxiliary circuit rated value600 Vmaximum permissible voltage for protective separation between400 Vshock resistance at rectangular impulse-at DC10g / 5 ms, 7,5g / 10 msshock resistance with sine pulse-at DC15g / 5 ms, 10g / 10 msmechanical service life (operating cycles)-of contactor typical10 000 000of the contactor with added electronically optimized5000 000auxiliary switch block typical10 000 000of the contactor with added auxiliary switch block typical10 000 000of the contactor with added auxiliary switch block typical10 000 000of the contactor with added auxiliary switch block typical10 000 000of the contactor with added auxiliary switch block typical10 000 000of the contactor with added auxiliary switch block typical2000 mambient conditions2000 mambient temperature25 +60 °Cof during storage-25 +60 °Ciduring storage-25 +60 °Celative hundity minum10 %95 %55 % Saccording to IEC 60068-2-30	insulation voltage	
surge voltage resistance       6         • of main circuit rated value       6 kV         • of auxiliary circuit rated value       6 kV         • of auxiliary circuit rated value       6 kV         maximum permissible voltage for protective separation between coll and main contacts according to EN 60947-1       400 V         shock resistance at rectangular impulse       400 V         • at DC       10g / 5 ms, 7,5g / 10 ms         shock resistance with sine pulse       15g / 5 ms, 10g / 10 ms         • at DC       15g / 5 ms, 10g / 10 ms         mechanical service life (operating cycles)       00000         • of the contactor with added electronically optimized auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2009         Ambient conditions       2 000 m         ambient temperature       -25 +60 °C         • during storage       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         95 %       95 %	<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	690 V
• of main circuit rated value6 kV• of auxiliary circuit rated value6 kVmaximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1400 Vshock resistance at rectangular impulse10g / 5 ms, 7,5g / 10 ms• at DC10g / 5 ms, 7,5g / 10 msshock resistance with sine pulse • at DC15g / 5 ms, 10g / 10 ms• at DC15g / 5 ms, 10g / 10 msmechanical service life (operating cycles) • of contactor typical000000• of the contactor with added electronically optimized auxiliary switch block typical10 000 000• of the contactor with added electronically optimized auxiliary switch block typical10 000 000• of the contactor with added electronically optimized auxiliary switch block typical10 000 000• of the contactor with added electronically optimized auxiliary switch block typical00 000• of the contactor with added electronically optimized auxiliary switch block typical10 000 000• of the contactor with added electronically optimized auxiliary switch block typical00 000• of the contactor with added electronically optimized auxiliary switch block typical10 000 000• of the contactor with added electronically optimized auxiliary solution attitude at height above sea level maximum2 000 mInstallation attitude at height above sea level maximum2 000 m• during operation • during operation • during storage-25 +60 °C• during storage-25 +60 °C• relative humidity at 55 °C according to IEC 60068-2-30 maximum10 % </th <th><ul> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul></th> <th>690 V</th>	<ul> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>	690 V
• of auxiliary circuit rated value6 kVmaximum permissible voltage for protective separation between coll and main contacts according to EN 60947-1400 Vshock resistance at rectangular impulse • at DC10g / 5 ms, 7,5g / 10 msshock resistance with sine pulse • at DC10g / 5 ms, 7,5g / 10 mse at DC15g / 5 ms, 10g / 10 msmechanical service life (operating cycles) • of contactor typical10 000 000• of the contactor with added electronically optimized auxiliary switch block typical5 000 000• of the contactor with added auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical0 000 000• of the contactor with added auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical2 000 m• of the contactor with addee auximum2 000 mauxiliary auxing aperation-25 +60 °C• during operation-25 +60 °C• during storage-55 +80 °C• relative humidity minimum10 %95 %95 %	surge voltage resistance	
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1400 Vshock resistance at rectangular impulse • at DC10g / 5 ms, 7,5g / 10 msshock resistance with sine pulse • at DC10g / 5 ms, 7,5g / 10 msshock resistance with sine pulse • at DC10g / 5 ms, 10g / 10 msmechanical service life (operating cycles) • of contactor typical0000000of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical10 000 000of the contactor with added auxiliary switch block typical10 000 000reference code according to IEC 81346-2 Substance Prohibitance (Date)QMileint conditions2000 mambient temperature • during operation • during storage2000 menablemt temperature • during storage-25 +60 °C -55 +80 °Cenablemt temperature • during storage-25 +80 °Cenablemt temperature • Battive humidity at 55 °C according to IEC 60068-2-30 maximum95 %	<ul> <li>of main circuit rated value</li> </ul>	6 kV
coil and main contacts according to EN 60947-1       indext resistance at rectangular impulse         • at DC       10g / 5 ms, 7,5g / 10 ms         shock resistance with sine pulse       isg / 5 ms, 10g / 10 ms         • at DC       15g / 5 ms, 10g / 10 ms         mechanical service life (operating cycles)       is 000 000         • of contactor typical       10 000 000         • of the contactor with added electronically optimized auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 0/01/2009         Ambient conditions       2 000 m         • during operation       -25 +60 °C         • during storage	<ul> <li>of auxiliary circuit rated value</li> </ul>	6 kV
• at DC10g / 5 ms, 7,5g / 10 msshock resistance with sine pulse • at DC15g / 5 ms, 10g / 10 msmechanical service life (operating cycles) • of contactor typical10 000 000• of contactor typical10 000 000• of the contactor with added electronically optimized auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical2000 m• of the contactor with added auxiliary switch block typical10/01/2009• of the contactor with added auxiliary switch block typical2 000 m• of the contactor with addee auxiliary switch block typical10/01/2009• of the contactor with addee auxiliary switch block typical2 000 m• ambient conditions2 000 m• ambient temperature • during operation • during storage-25 +60 °C• during storage relative humidity minimum10 %• felative humidity at 55 °C according to IEC 60068-2-30 maximum95 %		400 V
shock resistance with sine pulse       15g / 5 ms, 10g / 10 ms         mechanical service life (operating cycles)       10 000 000         • of contactor typical       10 000 000         • of the contactor with added electronically optimized auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2009         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30       95 %	shock resistance at rectangular impulse	
• at DC15g / 5 ms, 10g / 10 msmechanical service life (operating cycles)10 000 000• of contactor typical10 000 000• of the contactor with added electronically optimized auxiliary switch block typical5 000 000• of the contactor with added auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical0• of the contactor with added auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical0• of the contactor with added auxiliary switch block typical0• of the contactor with added auxiliary switch block typical0• of the contactor with added auxiliary switch block typical0• of the contactor with added auxiliary switch block typical0• of the contactor with added auxiliary switch block typical0• of the contactor with added auxiliary switch block typical0• of the contactor with added auxiliary switch block typical0• of the contactor with added auxiliary switch block typical0• of the contactor with added auxiliary switch block typical0• of the contactor with added auxiliary switch block typical2• of the contactor with added auxiliary switch block typical2• of the contactor with added auxiliary switch block typical-25 +60	• at DC	10g / 5 ms, 7,5g / 10 ms
mechanical service life (operating cycles)       10 000 000         • of contactor typical       10 000 000         • of the contactor with added electronically optimized auxiliary switch block typical       5 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         • of the contactor with added auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2009         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         aubient temperature       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30       95 %	shock resistance with sine pulse	
• of contactor typical10 000 000• of the contactor with added electronically optimized auxiliary switch block typical5 000 000• of the contactor with added auxiliary switch block typical10 000 000• of the contactor with added auxiliary switch block typical0 000 000reference code according to IEC 81346-2QSubstance Prohibitance (Date)10/01/2009Ambient conditions2 000 minstallation altitude at height above sea level maximum2 000 mambient temperature • during operation-25 +60 °C• during storage-55 +80 °Crelative humidity minimum10 %relative humidity at 55 °C according to IEC 60068-2-30 maximum95 %	• at DC	15g / 5 ms, 10g / 10 ms
• of the contactor with added electronically optimized auxiliary switch block typical5 000 000• of the contactor with added auxiliary switch block typical10 000 000reference code according to IEC 81346-2QSubstance Prohibitance (Date)10/01/2009Ambient conditions2 000 minstallation altitude at height above sea level maximum2 000 mambient temperature • during operation • during storage-25 +60 °C• during storage-55 +80 °Crelative humidity minimum10 %relative humidity at 55 °C according to IEC 60068-2-30 maximum95 %	mechanical service life (operating cycles)	
auxiliary switch block typicalI 0 000 000reference code according to IEC 81346-2QSubstance Prohibitance (Date)10/01/2009Ambient conditions2 000 minstallation altitude at height above sea level maximum2 000 mambient temperature-25 +60 °C• during storage-25 +80 °Crelative humidity minimum10 %relative humidity at 55 °C according to IEC 60068-2-30 maximum95 %	<ul> <li>of contactor typical</li> </ul>	10 000 000
reference code according to IEC 81346-2QSubstance Prohibitance (Date)10/01/2009Ambient conditions2 000 minstallation altitude at height above sea level maximum2 000 mambient temperature • during operation • during storage-25 +60 °Crelative humidity minimum10 %relative humidity at 55 °C according to IEC 60068-2-30 maximum95 %		5 000 000
Substance Prohibitance (Date)       10/01/2009         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30 maximum       95 %	<ul> <li>of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000
Ambient conditions         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30 maximum       95 %	reference code according to IEC 81346-2	Q
installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30 maximum       95 %	Substance Prohibitance (Date)	10/01/2009
ambient temperature     -25       • during operation     -25       • during storage     -55       relative humidity minimum     10 %       relative humidity at 55 °C according to IEC 60068-2-30 maximum     95 %	Ambient conditions	
• during operation     -25 +60 °C       • during storage     -55 +80 °C       relative humidity minimum     10 %       relative humidity at 55 °C according to IEC 60068-2-30 maximum     95 %	installation altitude at height above sea level maximum	2 000 m
• during storage     -55 +80 °C       relative humidity minimum     10 %       relative humidity at 55 °C according to IEC 60068-2-30 maximum     95 %	ambient temperature	
relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30 maximum       95 %	during operation	-25 +60 °C
relative humidity at 55 °C according to IEC 60068-2-30 95 %	during storage	-55 +80 °C
maximum	relative humidity minimum	10 %
Main circuit		95 %
	Main circuit	
number of poles for main current circuit 3	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-3e rated value maximum</li> </ul>	690 V
operational current	
<ul> <li>at AC-1 at 400 V at ambient temperature 40 °C rated</li> </ul>	40 A
value	
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	40 A
— up to 690 V at ambient temperature 60 °C rated	35 A
value	
• 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-3e	
— 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
— up to 500 V for current peak value n=20 rated value	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
	7.6 A
<ul> <li>— up to 230 V for current peak value n=30 rated value</li> <li>— up to 400 V for current peak value n=30 rated value</li> </ul>	7.6 A
— up to 500 V for current peak value n=30 rated value	7.6 A
— up to 690 V for current peak value n=30 rated value	7.6 A
minimum cross-section in main circuit at maximum AC-1 rated	10 mm <sup>2</sup>
value	
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	7.7 A
at 690 V rated value	7.7 A
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	35 A
— at 60 V rated value	20 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.4 A
— at 600 V rated value	0.25 A
• with 2 current paths in series at DC-1	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
— at 600 V rated value	0.8 A
<ul> <li>with 3 current paths in series at DC-1</li> </ul>	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	35 A
— at 440 V rated value	2.9 A
— at 600 V rated value	1.4 A
<ul> <li>at 1 current path at DC-3 at DC-5</li> </ul>	

— at 24 V rated value	20 A
— at 60 V rated value	5 A
— at 110 V rated value	2.5 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 60 V rated value	35 A
— at 110 V rated value	15 A
— at 220 V rated value	3 A
— at 440 V rated value	0.27 A
— at 600 V rated value	0.16 A
<ul> <li>with 3 current paths in series at DC-3 at DC-5</li> </ul>	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	10 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
operating power	
• at AC-2 at 400 V rated value	7.5 kW
• at AC-3	
— at 230 V rated value	4 kW
— at 400 V rated value	7.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	11 kW
• at AC-3e	
— at 230 V rated value	4 kW
— at 400 V rated value	4.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	11 kW
operating power for approx. 200000 operating cycles at AC-	
4	
• at 400 V rated value	3.5 kW
at 690 V rated value	6 kW
operating apparent power at AC-6a	4511/4
• up to 230 V for current peak value n=20 rated value	4.5 kVA
• up to 400 V for current peak value n=20 rated value	7.8 kVA
• up to 500 V for current peak value n=20 rated value	9.9 kVA
• up to 690 V for current peak value n=20 rated value	13.6 kVA
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	3 kVA
• up to 400 V for current peak value n=30 rated value	5.2 kVA
• up to 500 V for current peak value n=30 rated value	6.6 kVA
up to 690 V for current peak value n=30 rated value	9.1 kVA
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>	225 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	225 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	189 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 30 s switching at zero current maximum</li> </ul>	140 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 60 s switching at zero current maximum</li> </ul>	115 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at DC	1 500 1/h
operating frequency	
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	1 000 1/h
• at AC-3 maximum	1 000 1/h
• at AC-3e maximum	1 000 1/h
• at AC-4 maximum	300 1/h

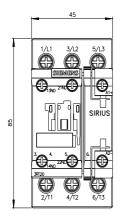
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage at DC	
	72 V
rated value	12 V
operating range factor control supply voltage rated value of magnet coil at DC	
• initial value	0.8
full-scale value	1.1
closing power of magnet coil at DC	5.9 W
holding power of magnet coil at DC	5.9 W
closing delay	
at DC	50 170 ms
opening delay	
at DC	15 18 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	
• 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
<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
<ul> <li>at 600 V rated value</li> </ul>	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
<ul> <li>at 60 V rated value</li> </ul>	2 A
<ul> <li>at 110 V rated value</li> </ul>	1A
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	14 A
at 600 V rated value	17 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 V rated value	1 hp
— at 230 V rated value	3 hp
for 3-phase AC motor	
— at 200/208 V rated value	3 hp
— at 220/230 V rated value	5 hp
— at 460/480 V rated value	10 hp
— at 575/600 V rated value	15 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	
- Tor short-orout protection of the main circuit	

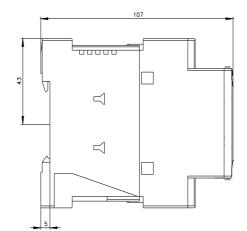
- with type of coordination 1 required	gG: 63A (690V,100kA), aM: 32A (690V,100kA), BS88: 63A (415V,80kA)		
— with type of assignment 2 required	gG: 25A (690V,100kA), aM: 20A (690V,100kA), BS88: 25A (415V,80kA)		
<ul> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 10 A (500 V, 1 kA)		
Installation/ mounting/ dimensions			
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and		
	backward by +/- 22.5° on vertical mounting surface		
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715		
side-by-side mounting	Yes		
height	85 mm		
width	45 mm		
depth	107 mm		
required spacing			
with side-by-side mounting	40		
— forwards	10 mm		
— upwards	10 mm		
— downwards	10 mm		
— at the side	0 mm		
for grounded parts     forwards	10 mm		
— forwards	10 mm		
— upwards	10 mm		
— at the side	6 mm		
— downwards	10 mm		
for live parts     forwards	10 mm		
— 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	0 + (4 - 0.5 - 2 + 2) + (0.5 - 4.0 - 2 + 2)		
• solid	$2x (1 2.5 mm^2), 2x (2.5 10 mm^2)$		
solid or stranded	$2x (1 2.5 mm^2), 2x (2.5 10 mm^2)$		
finely stranded with core end processing	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²		
connectable conductor cross-section for main contacts	1 10 mm²		
solid	1 10 mm <sup>2</sup>		
stranded     finally stranded with core and processing	1 10 mm <sup>2</sup>		
finely stranded with core end processing	1 10 mm <sup>2</sup>		
connectable conductor cross-section for auxiliary contacts	0.5 2.5 mm <sup>2</sup>		
<ul> <li>solid or stranded</li> <li>finally stranded with core and processing</li> </ul>	0.5 2.5 mm <sup>2</sup>		
finely stranded with core end processing	0.5 2.5 mm²		
type of connectable conductor cross-sections			
<ul> <li>for auxiliary contacts</li> <li>solid or stranded</li> </ul>	$2x(0.5, 1.5 \text{ mm}^2)$ $2x(0.75, 2.5 \text{ mm}^2)$		
<ul> <li>— solid or stranded</li> <li>finely stranded with core and processing</li> </ul>	$2x (0.5 \dots 1.5 \text{ mm}^2), 2x (0.75 \dots 2.5 \text{ mm}^2)$		
<ul> <li>finely stranded with core end processing</li> <li>for AWG cables for auxiliary contacts</li> </ul>	2x (0.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> )		
for AWG cables for auxiliary contacts	2x (20 16), 2x (18 14)		
AWG number as coded connectable conductor cross section			
for main contacts	16 8		
for auxiliary contacts	20 14		
Safety related data			
product function			
mirror contact according to IEC 60947-4-1	Yes		
B10 value with high demand rate according to SN 31920	450 000		
B10 value with high demand rate according to SN 31920	450 000		
proportion of dangerous failures			
	40 % 73 %		

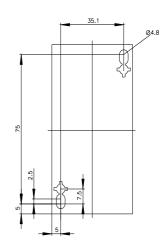
61508	T1 value for proof test interval or service life according to IEC 61508		20 a			
protection class IP o	on the front according to I	EC 60529 IP20	0			
touch protection on	the front according to IEC	60529 fing	er-safe, for vertical contact	from the front		
suitability for use						
<ul> <li>safety-related s</li> </ul>	witching OFF	Yes				
Certificates/ approvals	s					
General Product Ap	proval					
SFA CSA		<u>Confirmation</u>		KC	EHC	
EMC	Functional Safety/Safety of Ma- chinery	Declaration of Confo	ormity	Test Certificates		
RCM	<u>Type Examination Cer-</u> tificate	CE EG-Konf.	UK CA	<u>Type Test Certific-</u> ates/Test Report	Special Test Certific- ate	
Marine / Shipping				-	-	
ABS	BUREAU VERITAS		Llovd's Register us	RINA	RMRS	
other		Railway	Dangerous Good	Environment		
<u>Confirmation</u>		Vibration and Shock	Transport Information	Environmental Con- firmations		
Further information						
Siemens has decided to exit the Russian market (see here). https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business						
Siemens is working on the renewal of the current EAC certificates. Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).						
Information on the packaging						
https://support.industry.siemens.com/cs/ww/en/view/109813875 Information- and Downloadcenter (Catalogs, Brochures,)						
https://www.siemens.com/ic10						
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2025-1BJ80						
https://mall.industry.si Cax online generator		alog/product?mlfb=3RT2	<u>2025-1BJ80</u>			
	tion.siemens.com/WW/CAX	order/default.aspx?lang	en&mlfb=3RT2025-1BJ80			
Service&Support (Ma	anuals, Certificates, Chara	acteristics, FAQs,)				
https://support.industry.siemens.com/cs/ww/en/ps/3RT2025-1BJ80 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros,) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2025-1BJ80⟨=en						

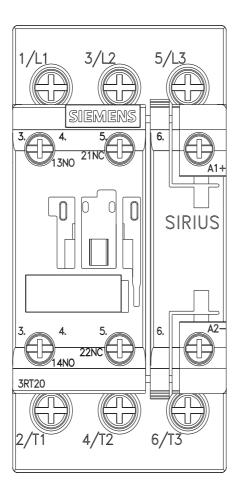
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT2025-1BJ80/char

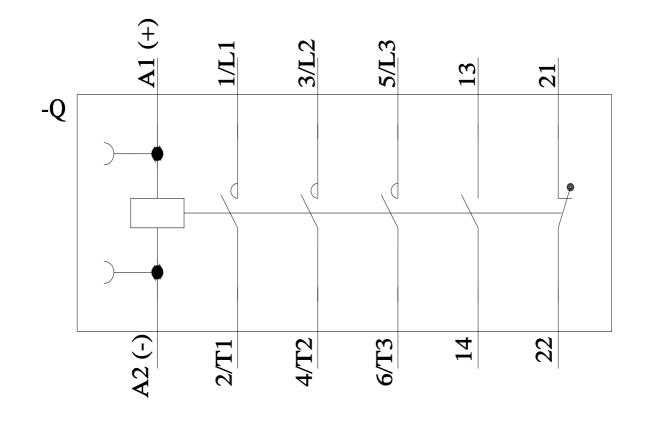
Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2025-1BJ80&objecttype=14&gridview=view1











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