## SIEMENS

## Data sheet

## 3RT2016-1BB42-0CC0



power contactor, AC-3e/AC-3, 9 A, 4 kW / 400 V, 3-pole, 24 V DC, auxiliary contacts: 1 NC, screw terminal, size: S00, communication-capable

product brand name         SIRIUS           product designation         Power contactor           product type designation         3812           Connard technical data         S00           size of contactor         S00           product extension         Yes           - function module for communication         Yes           power loss [W] for rated value of the current         0.9 W           - at AC in hot operating state         0.9 W           - at AC in hot operating state per pole         0.3 W           - of main circuit with degree of pollution 3 rated value         680 V           - of auxiliary circuit with degree of pollution 3 rated value         690 V           - of auxiliary circuit rated value         680 V           - of auxiliary circuit rated value         6 kV           - of auxiliary circuit rated value         600 V           - of auxiliary circuit rated value         6 kV           - of auxiliary circuit rated value         5 00 V           - of auxiliary circuit rated value         6 kV      <		
product type designation         3RT2           Ganeral technical data	product brand name	SIRIUS
General technical data     S00       size of contactor     S00       product extension     Yes       • auxiliary switch     Yes       ower loss [W] for rated value of the current     0.9 W       • at AC in hot operating state     0.9 W       • at AC in hot operating state prole     0.3 W       • without load current share typical     680 V       • of main circuit with degree of pollution 3 rated value     690 V       • of auxiliary circuit with degree of pollution 3 rated value     680 V       • of auxiliary circuit rated value     64 V       • of auxiliary circuit rated value     61 V       • of contactor typical     60 V       • at DC     6.7g / 5 ms, 4.2g / 10 ms       • at DC     10,5g / 5 ms, 6.6g / 10 ms       • of the contactor with added acternically optimized auxiliary switch block typical     30 000 000       • of the contactor with added acternically optimized auxiliary switch block typical     10 000 000       • of the contactor with added acternically optimized auxiliary switch block typical     10 000 000       • of the contactor with a	product designation	Power contactor
size of contactor     S00       product extension     • function module for communication     Yes       • auxiliary switch     Yes       power loss [W] for rated value of the current     0.9 W       • at AC in hot operating state ery pole     0.3 W       • without load current share typical     4 W       Insulation voltage     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 rated value     64 V       • of auxiliary sitte bio contacts according to EN 60947-1     400 V       shock resistance with sine pulse     61,57 fs.ms, 4,2g / 10 ms       • at DC     10,5g / 5 ms, 6,6g / 10 ms       mechanical service life (operating cycles)     600 000       • of the contactor with added electronically optimized     300	product type designation	3RT2
product extension     Yes       • function module for communication     Yes       • auxiliary switch     Yes       • auxiliary switch     Yes       • at AC in hot operating state     0.9 W       • at AC in hot operating state per pole     0.3 W       • without load current share typical     4 W       insulation voltage     690 V       • of main circuit with degree of pollution 3 rated value     690 V       • of an in circuit rated value     690 V       • of an in circuit rated value     690 V       • of an in circuit rated value     64V       • of the contactor with sine pulse     6.7g / 5 ms, 4.2g / 10 ms       • at DC     10.5g / 5 ms, 6.6g / 10 ms       machineal service life (operating cycles)     30 000 000       • 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	General technical data	
• function module for communication     Yes       • auxiliary switch     Yes       power loss [W] for rated value of the current	size of contactor	S00
• auxiliary switch         Yes           power loss [W] for rated value of the current         .9 W           • at AC in hot operating state per pole         0.3 W           • at AC in hot operating state per pole         0.3 W           • without load current share typical         4 W           Insulation voltage         690 V           • of main circuit with degree of pollution 3 rated value         690 V           • of main circuit rated value         690 V           • of main circuit rated value         64V           • of main circuit rated value         6 kV           • of auxiliary circuit with degree of pollution 3 rated value         6 kV           • of main circuit rated value         6 kV           • of auxiliary circuit rated value         6 kV           • of auxiliary circuit rated value         6 kV           • ad DC         6.7g / 5 ms, 6.8g / 10 ms           • at DC         10.5g / 5 ms, 6.8g / 10 ms           • of contactor with added electronically optimized auxiliary switch block 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 sultiaris switch block typical         10 000 000	product extension	
power loss [W] for rated value of the current     0.9 W       e at AC in hot operating state     0.9 W       • at AC in hot operating state per pole     0.3 W       • without load current share typical     4 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       • auxiliary summation between colia and main contacts according to EN 60947-1     400 V       shock resistance at rectangular impulse     6,7g / 5 ms, 4,2g / 10 ms       • at DC     6,7g / 5 ms, 6,6g / 10 ms       mechanical service life (operating cycles)     0 000 000       • of the contactor with added auxiliary switch block typical     10 000 000	<ul> <li>function module for communication</li> </ul>	Yes
• at AC in hot operating state     0.9 W       • at AC in hot operating state price     0.3 W       • without load current share typical     4 W       insultation 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 main circuit rated value     690 V       • of main circuit rated value     64 V       • of auxiliary circuit rated value     6 kV       • of auxiliary since bit 60947-1     400 V       shock resistance at rectangular impulse     6.7g / 5 ms, 4.2g / 10 ms       • at DC     10.5g / 5 ms, 6.6g / 10 ms       mechanical service life (operating cycles)     5 000 000       • of the contactor with added electronically optimized     30 000 000       • of the contactor with added electronically optimized     10 000 000       auxiliary switch block typical     10 000 000       reference code according to IEC 81346-2     <	auxiliary switch	Yes
• at AC in hot operating state per pole       0.3 W         • without bad current share typical       4 W         insulation voltage       6 M         • 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         • at DC       6.7g / 5 ms, 4.2g / 10 ms         shock resistance with sine pulse       10.5g / 5 ms, 6.6g / 10 ms         • at DC       10.5g / 5 ms, 6.6g / 10 ms         • of contactor typical       30 000 000         • 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	power loss [W] for rated value of the current	
• without load current share typical       4 VV         insulation voltage       690 V         • of main circuit with degree of pollution 3 rated value       690 V         surge voltage resistance       690 V         • of main circuit with degree of pollution 3 rated value       690 V         surge voltage resistance       6 kV         • of main circuit rated value       6 kV         • of auxiliary circuit rated value       6 kV         • at DC       6.7g / 5 ms, 4.2g / 10 ms         • at DC       10.5g / 5 ms, 6.6g / 10 ms         • at DC       10.5g / 5 ms, 6.6g / 10 ms         • of contactor typical       30 000 000         • 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         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       1001/2009         Ambient conditions       -25 +60 °C         • during porage       -55 +60 °C	<ul> <li>at AC in hot operating state</li> </ul>	0.9 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         surge voltage resistance       680 V         • of main circuit rated value       6 kV         • of auxiliary circuit rated value       6 kV         maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1       400 V         shock resistance at rectangular impulse       6.7g / 5 ms, 4.2g / 10 ms         • at DC       6.7g / 5 ms, 6.6g / 10 ms         mechanical service life (operating cycles)       10.5g / 5 ms, 6.6g / 10 ms         • 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         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2009         Ambient temperature       -0 °C         • during storage       -25 +60 °C         • during storage </th <th><ul> <li>at AC in hot operating state per pole</li> </ul></th> <th>0.3 W</th>	<ul> <li>at AC in hot operating state per pole</li> </ul>	0.3 W
• 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     6 kV       • of auxiliary circuit rated value     6 kV       maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1     400 V       shock resistance at rectangular impulse     6,7g / 5 ms, 4,2g / 10 ms       • at DC     6,7g / 5 ms, 4,2g / 10 ms       shock resistance with sine pulse     6,000000       • at DC     10,5g / 5 ms, 6,6g / 10 ms       mechanical service life (operating cycles)     30 000 000       • 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       reference code according to IEC 81346-2     Q       Substance Prohibitance (Date)     10/01/2009       Ambient conditions     -25 +60 °C       • during operation     -25 +60 °C       • during storage     -55 +60 °C       • during storage     -55 +60 °C       • felative humidity minimum     10 %       95 %     95 %	<ul> <li>without load current share typical</li> </ul>	4 W
• of auxiliary circuit with degree of pollution 3 rated value       690 V         surge voltage resistance       6 kV         • of main circuit rated value       6 kV         • of auxiliary circuit rated value       6 kV         • of auxiliary circuit rated value       6 kV         • of auxiliary circuit rated value       6 kV         • at DC       60 V         • at DC       6, 7g / 5 ms, 4,2g / 10 ms         • at DC       10,5g / 5 ms, 6,6g / 10 ms         • at DC       10,5g / 5 ms, 6,6g / 10 ms         • at DC       10,5g / 5 ms, 6,6g / 10 ms         • at DC       10,5g / 5 ms, 6,6g / 10 ms         • at DC       10,000 000         • of contactor typical       30 000 000         • 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         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       1001/2009         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -25 +60 °C         • during storage       -55 +60 °C         • during storage       -5	insulation voltage	
surge voltage resistance       6 kV         • of main circuit rated value       6 kV         • of auxiliary circuit rated value       6 kV         maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1       400 V         shock resistance at rectangular impulse       6,7g / 5 ms, 4,2g / 10 ms         • at DC       6,7g / 5 ms, 6,6g / 10 ms         mechanical service life (operating cycles)       000 000         • of the contactor with added electronically optimized auxiliary switch block typical       30 000 000         • 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       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity at 55 °C according to IEC 60068-2-30 maximum       95 %	<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	690 V
• 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       6,7g / 5 ms, 4,2g / 10 ms         • at DC       6,7g / 5 ms, 6,6g / 10 ms         mechanical service life (operating cycles)       00 000         • of the contactor typical       5 000 000         • 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         ambient temperature       -55 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         95 %       95 %	<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 impulse6,7g / 5 ms, 4,2g / 10 ms• at DC6,7g / 5 ms, 4,2g / 10 msshock resistance with sine pulse10,5g / 5 ms, 6,6g / 10 ms• at DC10,5g / 5 ms, 6,6g / 10 ms• of contactor typical30 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 typical2 000 m• of the contactor with addee elevel maximum2 000 mambient conditions-25 +60 °C• during operation-25 +60 °C• during storage-55 +80 °C• relative humidity at 55 °C according to IEC 60068-2-30 maximum95 %	surge voltage resistance	
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1       400 V         shock resistance at rectangular impulse <ul> <li>at DC</li> <li>6,7g / 5 ms, 4,2g / 10 ms</li> <li>shock resistance with sine pulse</li> <li>at DC</li> <li>10,5g / 5 ms, 6,6g / 10 ms</li> </ul> mechanical service life (operating cycles) <ul> <li>of contactor typical</li> <li>30 000 000</li> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> <li>10 000 000</li> </ul> 10 000 000         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/1/2009         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -55 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         95 %	<ul> <li>of main circuit rated value</li> </ul>	6 kV
coil and main contacts according to EN 60947-1         shock resistance at rectangular impulse         • at DC       6,7g / 5 ms, 4,2g / 10 ms         shock resistance with sine pulse       -         • at DC       10,5g / 5 ms, 6,6g / 10 ms         mechanical service life (operating cycles)       -         • of contactor typical       30 000 000         • 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         reference code according to IEC 81346-2       Q         Substance Prohibitance (Date)       10/01/2009         Ambient conditions       2 000 m         ambient temperature       -         • 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 %         Main circuit	<ul> <li>of auxiliary circuit rated value</li> </ul>	6 kV
• at DC6,7g / 5 ms, 4,2g / 10 msshock resistance with sine pulse10,5g / 5 ms, 6,6g / 10 ms• at DC10,5g / 5 ms, 6,6g / 10 msmechanical service life (operating cycles)30 000 000• of contactor typical30 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 000reference code according to IEC 81346-2QSubstance Prohibitance (Date)10/01/2009Ambient conditions2 000 minstallation altitude at height above sea level maximum a during operation2 000 m• during operation • during storage-25 +60 °C• relative humidity minimum10 %relative humidity at 55 °C according to IEC 60068-2-30 maximum95 %		400 V
shock resistance with sine pulse       at DC         • at DC       10,5g / 5 ms, 6,6g / 10 ms         mechanical service life (operating cycles)       30 000 000         • of contactor typical       30 000 000         • 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 +80 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30       95 %         Main circuit       40 in circuit	shock resistance at rectangular impulse	
• at DC10,5g / 5 ms, 6,6g / 10 msmechanical service life (operating cycles) • of contactor typical30 000 000• of the contactor with added electronically optimized auxiliary switch block typical30 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 000reference code according to IEC 81346-2QSubstance Prohibitance (Date)10/01/2009Ambient conditions2 000 minstallation altitude at height above sea level maximum2 000 m• during operation • during operation • during storage-25 +60 °C• during storage relative humidity minimum10 %relative humidity at 55 °C according to IEC 60068-2-30 maximum95 %	• at DC	6,7g / 5 ms, 4,2g / 10 ms
mechanical service life (operating cycles)       30 000 000         • of contactor typical       5 000 000         • 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 +80 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30       95 %         Main circuit	shock resistance with sine pulse	
• of contactor typical30 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 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 %	• at DC	10,5g / 5 ms, 6,6g / 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>of the contactor with added auxiliary switch block typical</li> <li>10 000 000</li> <li>reference code according to IEC 81346-2</li> <li>Q</li> <li>Substance Prohibitance (Date)</li> <li>10/01/2009</li> <li>Ambient conditions</li> <li>installation altitude at height above sea level maximum</li> <li>2 000 m</li> <li>ambient temperature         <ul> <li>during operation</li> <li>-25 +60 °C</li> <li>-55 +80 °C</li> </ul> </li> <li>relative humidity minimum</li> <li>10 %</li> <li>relative humidity at 55 °C according to IEC 60068-2-30 maximum</li> <li>maximum</li> </ul>	mechanical service life (operating cycles)	
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 %         Main circuit       95 %	<ul> <li>of contactor typical</li> </ul>	30 000 000
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 %         Main circuit       95 %		5 000 000
Substance Prohibitance (Date)       10/01/2009         Ambient conditions       10/01/2009         installation altitude at height above sea level maximum       2 000 m         ambient temperature       2 000 m         • 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 %         Main circuit	reference code according to IEC 81346-2	Q
installation altitude at height above sea level maximum       2 000 m         ambient temperature <ul> <li>during operation</li> <li>-25 +60 °C</li> <li>during storage</li> <li>-55 +80 °C</li> </ul> relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30 maximum       95 %         Main circuit       4	Substance Prohibitance (Date)	10/01/2009
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 %         Main circuit	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 %         Main circuit	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 %       Main circuit	ambient temperature	
relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30       95 %         Main circuit       95 %	during operation	-25 +60 °C
relative humidity at 55 °C according to IEC 60068-2-30       95 %         maximum       95 %         Main circuit       95 %	during storage	-55 +80 °C
Main circuit	relative humidity minimum	10 %
		95 %
number of poles for main current circuit 3	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
<ul> <li>at AC-3e rated value maximum</li> </ul>	690 V
operational current	
• at AC-1 at 400 V at ambient temperature 40 °C rated	22 A
value	
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	22 A
— up to 690 V at ambient temperature 60 °C rated	20 A
value	
● at AC-3	
— at 400 V rated value	9 A
— at 500 V rated value	7.7 A
— at 690 V rated value	6.7 A
• at AC-3e	
— at 400 V rated value	9 A
— at 500 V rated value	7.7 A
— at 690 V rated value	6.7 A
at AC-4 at 400 V rated value	8.5 A
at AC-5a up to 690 V rated value	19.4 A
• at AC-5b up to 400 V rated value	7.4 A
• at AC-6a	5.2.4
— up to 230 V for current peak value n=20 rated value	5.3 A
<ul> <li>— up to 400 V for current peak value n=20 rated value</li> <li>— up to 500 V for current peak value n=20 rated value</li> </ul>	5.3 A 5.3 A
— up to 500 V for current peak value n=20 rated value	5.5 A
• at AC-6a	54
<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	3.5 A
— up to 200 V for current peak value n=30 rated value	3.5 A
— up to 500 V for current peak value n=30 rated value	3.6 A
— up to 690 V for current peak value n=30 rated value	3.3 A
minimum cross-section in main circuit at maximum AC-1 rated	4 mm <sup>2</sup>
value	
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	4.1 A
at 690 V rated value	3.3 A
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	20 A
— at 60 V rated value	20 A
— at 110 V rated value	2.1 A
— at 220 V rated value	0.8 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
<ul> <li>with 2 current paths in series at DC-1</li> </ul>	
— at 24 V rated value	20 A
— at 60 V rated value	20 A
— at 110 V rated value	12 A
— at 220 V rated value	1.6 A
— at 440 V rated value	0.8 A
— at 600 V rated value	0.7 A
<ul> <li>with 3 current paths in series at DC-1</li> </ul>	
— at 24 V rated value	20 A
— at 60 V rated value	20 A
— at 110 V rated value	20 A
— at 220 V rated value	20 A
— at 440 V rated value	1.3 A
— at 600 V rated value	1 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	0.5 A
— at 110 V rated value	0.15 A
<ul> <li>with 2 current paths in series 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	0.35 A
<ul> <li>with 3 current paths in series at DC-3 at DC-5</li> </ul>	
— at 24 V rated value	20 A
— at 60 V rated value	20 A
— at 110 V rated value	20 A
— at 220 V rated value	1.5 A
— at 440 V rated value	0.2 A
— at 600 V rated value	0.2 A
operating power	
• at AC-3	
— at 230 V rated value	2.2 kW
— at 400 V rated value	4 kW
— at 500 V rated value	4 kW
— at 690 V rated value	5.5 kW
• at AC-3e	
at AC-Se     — at 230 V rated value	2.2 kW
— at 230 V rated value	2.2 KVV 4 KW
	4 KW
— at 500 V rated value	5 kW
— at 690 V rated value operating power for approx. 200000 operating cycles at AC-	5 KW
4	
<ul> <li>at 400 V rated value</li> </ul>	2 kW
<ul> <li>at 690 V rated value</li> </ul>	2.5 kW
operating apparent power at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	2 kVA
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	3.6 kVA
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	4.6 kVA
• up to 690 V for current peak value n=20 rated value	5.9 kVA
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	1.3 kVA
• up to 400 V for current peak value n=30 rated value	2.4 kVA
• up to 500 V for current peak value n=30 rated value	3.1 kVA
• up to 690 V for current peak value n=30 rated value	4 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>	155 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	111 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	86 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 30 s switching at zero current maximum</li> </ul>	66 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 60 s switching at zero current maximum</li> </ul>	55 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at DC	10 000 1/h
operating frequency	
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	750 1/h
• at AC-3 maximum	750 1/h
• at AC-3e maximum	750 1/h
• at AC-4 maximum	250 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage at DC	
rated value	24 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	4 W
holding power of magnet coil at DC	4 W
closing delay	
• at DC	30 100 ms
opening delay	
• at DC	7 13 ms
arcing time	10 15 ms
control version of the switch operating mechanism	Standard A1 - A2, optionally via function module
Auxiliary circuit	
number of NC 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 125 V rated value	1A
at 220 V rated value	0.15 A
	0.15 A
operational current at DC-13	
at 24 V rated value	10 A
• at 48 V rated value	2 A
• at 60 V rated value	2 A
• at 110 V rated value	1 A
• at 125 V rated value	0.9 A
• at 220 V rated value	0.3 A
at 600 V rated value	0.1 A
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	7.6 A
at 600 V rated value	9 A
yielded mechanical performance [hp]	
<ul> <li>for single-phase AC motor</li> </ul>	
— at 110/120 V rated value	0.33 hp
— at 230 V rated value	1 hp
<ul> <li>for 3-phase AC motor</li> </ul>	
— at 200/208 V rated value	2 hp
— at 220/230 V rated value	3 hp
— at 460/480 V rated value	5 hp
— at 575/600 V rated value	7.5 hp
contact rating of auxiliary contacts according to UL	A600 / Q600
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: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)
— with type of assignment 2 required	gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (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	58 mm
width	45 mm
width	

depth	73 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
of magnet coil	Screw-type terminals
type of connectable conductor cross-sections for main contacts	
• solid	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²
solid or stranded	2x (0,5 1,5 mm <sup>2</sup> ), 2x (0,75 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup>
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> )
connectable conductor cross-section for main contacts	
• solid	0.5 4 mm²
• stranded	0.5 4 mm <sup>2</sup>
<ul> <li>finely stranded with core end processing</li> </ul>	0.5 2.5 mm <sup>2</sup>
connectable conductor cross-section for auxiliary contacts	
solid or stranded	0.5 4 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	0.5 2.5 mm <sup>2</sup>
type of connectable conductor cross-sections	
for auxiliary contacts	
— solid or stranded	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> )
<ul> <li>for AWG cables for auxiliary contacts</li> </ul>	2x (20 16), 2x (18 14), 2x 12
AWG number as coded connectable conductor cross	
section	
for main contacts	20 12
<ul> <li>for auxiliary contacts</li> </ul>	20 12
Safety related data	
product function	
<ul> <li>mirror contact according to IEC 60947-4-1</li> </ul>	Yes
B10 value with high demand rate according to SN 31920	1 000 000
proportion of dangerous failures	
• with low demand rate according to SN 31920	40 %
• with high demand rate according to SN 31920	73 %
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
T1 value for proof test interval or service life according to IEC 61508	20 a
protection class IP on the front according to IEC 60529	IP20
protoction clace in on the none according to ince could	
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
· · · · · · · · · · · · · · · · · · ·	finger-safe, for vertical contact from the front
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front Yes
touch protection on the front according to IEC 60529 suitability for use	

(SP) Can		<u>Confirmation</u>	(U) UI	KC	EHC
EMC	Functional Safety/Safety of Ma- chinery	Declaration of Confor	mity	Test Certificates	
RCM	<u>Type Examination Cer-</u> tificate	CE EG-Konf.	UK CA	Special Test Certific- ate	Type Test Certific- ates/Test Report
Marine / Shipping					
ABS	BUREAU VERITAS		Lloyd's Register us	PRS	RINA
Marine / Shipping	other		Railway	Dangerous Good	Environment
RMRS	<u>Confirmation</u>	UDE VDE	Vibration and Shock	Transport Information	Environmental Con- firmations
Further information					
https://press.siemens.s Siemens is working of Please contact your lo EAC relevant market ( Information on the pa https://support.industry Information- and Dow https://www.siemens.c Industry Mall (Online	vnloadcenter (Catalogs, E com/ic10	e/siemens-wind-down-russ rent EAC certificates. tatus of validity of the EAC EAEU member states Rus ew/109813875 Brochures,)	C certification if you intend sia or Belarus).	d to import or offer to supp	ly these products to an

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2016-1BB42-0CC0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2016-1BB42-0CC0

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

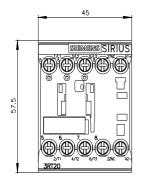
https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-1BB42-0CC0

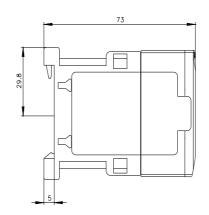
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2016-1BB42-0CC0&lang=en

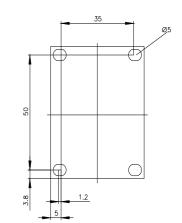
Characteristic: Tripping characteristics, I2t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-1BB42-0CC0/char

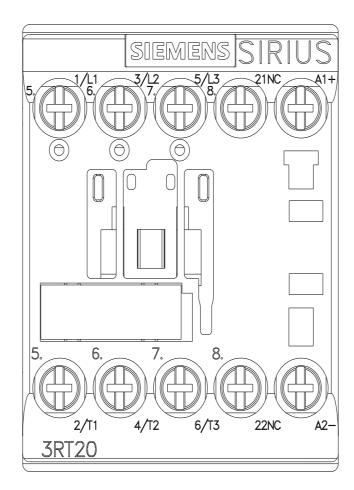
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siem ens.com/bilddb/index.aspx?view= . &mlfl 3RT2016-1BB42-0CC0&objecttype=14&gridview=view1

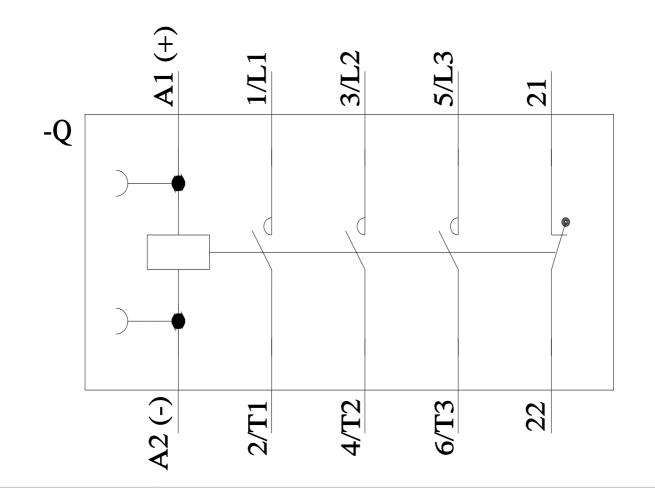








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