## SIEMENS

## Data sheet

## 3RT2016-1AK61



power contactor, AC-3e/AC-3, 9 A, 4 kW / 400 V, 3-pole, 110 V AC, 50 Hz / 120 V, 60 Hz, auxiliary contacts: 1 NO, screw terminal, size: S00

product brand name         SIRUS           product designation         Power contactor           product type designation         SIRT2           Ganard technical data         -           size of contactor         S00           product stension         No           • function module for communication         No           • auxiliary switch         Yes           power loss [W] for rated value of the current         -           • 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         4.4 W           insultation voltage         680 V           • of main circuit with degree of pollution 3 rated value         690 V           surge voltage resistance         680 V           • of auxiliary circuit rated value         6 KV           • of auxiliary dicuit rated value         6 kV           • of auxiliary circuit rated value         6 kV           • of contactor with added auxiliary surge prototactive separatio				
product type designation         3RT2           General technical data         S00           size of contactor         S00           product extension         No           • dunction module for communication         No           • auxilary switch         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           • without load current share typical         4.4 W           insulation voltage         660 V           • of main circuit with degree of pollution 3 rated value         680 V           • of auxiliary circuit rated value         680 V           • of auxiliary circuit rated value         6 kV           • of auxiliary switch         6 kV           • of auxiliary switch         6 kV           • of auxiliary switch block typical         600 V           • of contacts ecording to EN 008-7         400 V           • of contactor typical         30 000 000           • of contactor with added electronically optimized auxilia	product brand name	SIRIUS		
Ceneral technical data     S00       size of contactor     S00       product extension     • function module for communication.     No       • auxiliary switch     Yes       power loss [W] for rated value of the current     • at AC in hot operating state     0.9 W       • at AC in hot operating state     0.9 W     0.3 W       • without load current share typical     4.4 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 main circuit with degree of pollution 3 rated value     64 V       • of main circuit rated value     64 V       • of auxiliary circuit rated value     61 V       • of auxiliary circuit rated value     61 V       • of contactor typical     30 00 V       • at AC     10,5g / 5 ms, 6,6g / 10 ms       mechanical service life (operating cycles)     30 000 000       • 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 <t< th=""><th>product designation</th><th>Power contactor</th></t<>	product designation	Power contactor		
size of contactor     S00       product extension     • function module for communication     No       • auxilary switch     Yes       power loss [W] for rated value of the current     0.9 W       • at AC in hot operating state per pole     0.3 W       • without load current share typical     4.4 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 main circuit rated value     64 V       • of main circuit trated value     64 V       • of main circuit rated value     64 V       • of main circuit trated value     64 V       • of auxillary circuit rated value     64 V       • of auxillary circuit rated value     64 V       • of duxillary inputse     61 O V       • of auxillary switch block typical     400 V       • of the contactor with added electronically optimized     30 000 000       • of the contactor with added electronically optimized     30 000 000       • of the contactor with added electronically optimized     30 000 000       • o	product type designation	3RT2		
product extension     No       • function module for communication     No       • auxiliary switch     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 prole     0.3 W       • without load current share typical     4.4 W       insulation voltage     690 V       • of main circuit with degree of pollution 3 rated value     690 V       • of analing vicruit with degree of pollution 3 rated value     690 V       • of analing vicruit rated value     6 kV       • of main circuit rated value     6 kV       • of main incut rated value     6 kV       • of main incut rated value     6 kV       • of maining vicruit rated value     6 kV       • at AC     6.7g / 5 ms, 4.2g / 10 ms       shock resistance at rectangular impulse     6 dout 0       • at AC     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 00000       reference code according to IEC 81346-2     Q       Quot mambient temperature	General technical data			
• function module for communication       No         • auxiliary switch       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         • without load current share typical       4.4 W         Insultation voitage       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 main circuit and value       6 kV         • of main circuit rated value       6 kV         • of auxiliary circuit rated value       7 s ms, 6,8g / 10 ms         shock resistance with sine pulse       9 000 000         • of the contactor	size of contactor	S00		
• auxiliary switch         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           • without load current share typical         4.4 W           insultation 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 auxiliary oricuit with degree of pollution 3 rated value         64V           • of auxiliary oricuit rated value         64V           • at AC         6.7g / 5 ms, 6.6g / 10 ms           • at AC         10.5g / 5 ms, 6.6g / 10 ms           • at AC         5000 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 00	product extension			
power loss [W] for rated value of the current     0.9 W       • at AC in hot operating state per pole     0.3 W       • without load current share typical     4.4 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       • of main circuit rated value     6 kV       • of auxiliary circuit rated value     6 kV       • at AC     6.7g / 5 ms, 4.2g / 10 ms       shock resistance with sine pulse     6.7g / 5 ms, 4.2g / 10 ms       • at AC     10.5g / 5 ms, 6.6g / 10 ms       mechanical service life (operating cycles)     00 0000       • of the contactor with added auxiliary switch block typical     10 000 000       • of the contactor with added auxiliary switch block typical     10/00 1/2009       A	<ul> <li>function module for communication</li> </ul>	No		
• at AC in hot operating state     0.9 W       • at AC in hot operating state prole     0.3 W       • without load current share typical     4.4 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     680 V       • of auxiliary circuit rated value     6 kV       • at AC     6.7g / 5 ms, 4.2g / 10 ms       shock resistance with sine pulse     • at AC       • at AC     10.5g / 5 ms, 6.6g / 10 ms       mechanical service life (operating cycles)     0 000 000       • of the contactor with added electronically optimized     30 000 000       • of the contactor with added auxiliary switch block typical     10 000 000       • of the contactor with added auxiliary switch block typical	<ul> <li>auxiliary switch</li> </ul>	Yes		
• at AC in hot operating state per pole       0.3 W         • withbut load current share typical       4.4 W         insulation voltage       60 min circuit with degree of pollution 3 rated value       690 V         • of main circuit with degree of pollution 3 rated value       690 V         surge voltage resistance       60 KV         • of main circuit with degree of pollution 3 rated value       690 V         • of auxiliary circuit rated value       6 kV         • at AC       6.7g / 5 ms, 4.2g / 10 ms         shock resistance with sine pulse       -         • at AC       10.5g / 5 ms, 6.6g / 10 ms         mechanical service life (operating cycles)       -         • of contactor typical       30 000 000         • 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         reference code according to IEC 81346-2       Q	power loss [W] for rated value of the current			
without load current share typical     4.4 W      insulation voltage     of main circuit with degree of pollution 3 rated value     690 V      surge voltage resistance     of auxiliary circuit with degree of pollution 3 rated value     690 V      surge voltage resistance     of main circuit rated value         6 kV         6 of auxiliary circuit rated value         6 of work resistance at rectangular impulse         • at AC         10.5g / 5 ms, 6.6g / 10 ms     mechanical service life (operating cycles)         • of ontractor typical         • of ontractor typical         • of ountactor with added electronically optimized         auxiliary switch block typical         10 000 000         reference code according to IEC 81346-2         Q         Substance Prohibitance (Date)         Inot1/2009         Ambient conditions         installation altitude at height above sea level maximum         2 000 m         ambient temperature         • during storage         -55 +60 °C         relative humidity minimum         10 %         relative humidity minimum         10 %         relative humidity minimum         10 %	<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       690 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 AC       6.7g / 5 ms, 6.6g / 10 ms         mechanical service life (operating cycles)       0 contactor with added electronically optimized auxiliary switch block typical         • of the contactor with added auxiliary switch block typical       10 000 000         reference code according to EC 81346-2       Q         Substance Prohibitance (Date)       10/01/2009         Ambient conditions       -25 +60 °C         • during storage       -25 +60 °C         • during storage       -25 +60 °C         • during storage	<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       680 V         • of main 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       6,7 / 5 ms, 4,2g / 10 ms         • at AC       6,7 / 5 ms, 4,2g / 10 ms         shock resistance with sine pulse       6         • at AC       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 storage       -55 +60 °C	<ul> <li>without load current share typical</li> </ul>	4.4 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         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 AC       6,7g / 5 ms, 6,6g / 10 ms         mechanical service life (operating cycles)       000000         • of the contactor with added electronically optimized auxiliary witch 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 %	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 AC       6,7g / 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       30 000 000         • of the contactor with added electronically optimized auxiliary switch block typical       10 000 000         reference code according to IEC 81346-2       Q         Substance 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         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 AC       6,7g / 5 ms, 6,6g / 10 ms         shock resistance with sine pulse       6,000 000         • at AC       10,5g / 5 ms, 6,6g / 10 ms         mechanical service life (operating cycles)       30 000 000         • of the 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       2000 m         ambient temperature       -25 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minum       10 %         95 %       95 %	<ul> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>	690 V		
• 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       400 V         • at AC       6,7g / 5 ms, 4,2g / 10 ms         shock resistance with sine pulse       -         • at AC       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         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity at 55 °C according to IEC 60068-2-30       95 %         Main circuit       95 %	surge voltage resistance			
maximum permissible voltage for protective separation between       400 V         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 AC       6,7g / 5 ms, 6,6g / 10 ms         shock resistance with sine pulse       0,5g / 5 ms, 6,6g / 10 ms         • at AC       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         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       -55 +60 °C         • during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         95 %       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 AC       6,7g / 5 ms, 4,2g / 10 ms         shock resistance with sine pulse         • at AC       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       2000 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       Main circuit	<ul> <li>of auxiliary circuit rated value</li> </ul>	6 kV		
• at AC       6,7g / 5 ms, 4,2g / 10 ms         shock resistance with sine pulse       10,5g / 5 ms, 6,6g / 10 ms         • at AC       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         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 %         Main circuit		400 V		
shock resistance with sine pulse       10.5g / 5 ms, 6.6g / 10 ms         • at AC       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 +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	shock resistance at rectangular impulse			
• at AC10,5g / 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 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 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• ambient conditions2 000 m• 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 %Main circuitMain circuit	• at AC	6,7g / 5 ms, 4,2g / 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       5 000 000         • 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 %         Main circuit       4000	shock resistance with sine pulse			
<ul> <li>of contactor typical</li> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> <li>of the contactor with added auxiliary switch block typical</li> <li>of the contactor with added auxiliary switch block typical</li> <li>of the contactor with added 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>of the contactor with added 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>of the contactor with added 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>of the contactor with added 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>of the contactor with added 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>of the contactor with added 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>of the contactor with added auxiliary switch block typical</li> <li>of the contactor with added auxiliary switch block typical</li> <li>of the contactor typical</li> <li>the contactor typical</li> <li>of the contactor</li></ul>	• at AC	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>etative humidity minimum</li> <li>10 %</li> </ul> </li> <li>relative humidity at 55 °C according to IEC 60068-2-30 maximum</li> <li>Main circuit</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 %         relative humidity at 55 °C according to IEC 60068-2-30 maximum       95 %		5 000 000		
Substance Prohibitance (Date)       10/01/2009         Ambient conditions       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       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 %	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         • during operation         • during storage         -25 +60 °C         • during storage         -55 +80 °C         relative humidity minimum         10 %         relative humidity at 55 °C according to IEC 60068-2-30 maximum         Main circuit	Ambient conditions			
• during operation     • during storage     ·25 +60 °C     ·55 +80 °C     ·clative humidity minimum     10 %     relative humidity at 55 °C according to IEC 60068-2-30     maximum     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>	

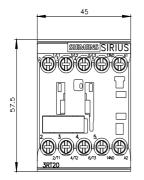
— at 24 V rated value	20 A			
— at 60 V rated value	0.5 A			
— at 110 V rated value	0.15 A			
<ul> <li>with 2 current paths in series at DC-3 at DC-5</li> </ul>				
— at 24 V rated value	20 A			
— at 60 V rated value	5 A			
— at 110 V rated value	0.35 A			
<ul> <li>with 3 current paths in series at DC-3 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 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 kW			
operating power for approx. 200000 operating cycles at AC-				
4				
<ul> <li>at 400 V rated value</li> </ul>	2 kW			
• at 690 V rated value	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			
<ul> <li>up to 690 V for current peak value n=20 rated value</li> </ul>	5.9 kVA			
operating apparent power at AC-6a				
<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	1.3 kVA			
<ul> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	2.4 kVA			
<ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	3.1 kVA			
<ul> <li>up to 690 V for current peak value n=30 rated value</li> </ul>	4 kVA			
short-time withstand current in cold operating state up to				
40 °C				
Imited to 1 s switching at zero current maximum	155 A; Use minimum cross-section acc. to AC-1 rated value			
Imited to 5 s switching at zero current maximum	111 A; Use minimum cross-section acc. to AC-1 rated value			
Imited to 10 s switching at zero current maximum	86 A; Use minimum cross-section acc. to AC-1 rated value			
Imited to 30 s switching at zero current maximum	66 A; Use minimum cross-section acc. to AC-1 rated value			
Imited to 60 s switching at zero current maximum	55 A; Use minimum cross-section acc. to AC-1 rated value			
no-load switching frequency				
• at AC	10 000 1/h			
operating frequency	4 000 4/h			
• 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	AC			
control supply voltage at AC				
• at 50 Hz rated value	110 V			
at 60 Hz rated value	120 V			
operating range factor control supply voltage rated value of magnet coil at AC				
• at 50 Hz	0.81.1			
	U.U 1.1			

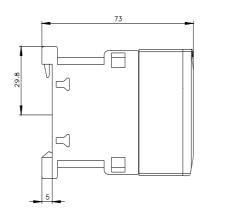
• at 60 Hz	0.8 1.1				
apparent pick-up power of magnet coil at AC					
• at 50 Hz	26.4 VA				
• at 60 Hz	26.4 VA				
inductive power factor with closing power of the coil					
• at 50 Hz	0.81				
• at 60 Hz	0.81				
apparent holding power of magnet coil at AC					
• at 50 Hz	4.4 VA				
• at 60 Hz	4.4 VA				
inductive power factor with the holding power of the coil					
● at 50 Hz	0.24				
• at 60 Hz	0.24				
closing delay					
• at AC	9 35 ms				
opening delay					
• at AC	4 15 ms				
arcing time	10 15 ms				
control version of the switch operating mechanism	Standard A1 - A2				
Auxiliary circuit					
number of NO contacts for auxiliary contacts instantaneous	1				
contact					
operational current at AC-12 maximum	10 A				
operational current at AC-15					
<ul> <li>at 230 V rated value</li> </ul>	10 A				
<ul> <li>at 400 V rated value</li> </ul>	3 A				
<ul> <li>at 500 V rated value</li> </ul>	2 A				
at 690 V rated value	1 A				
operational current at DC-12					
<ul> <li>at 24 V rated value</li> </ul>	10 A				
at 48 V rated value	6 A				
<ul> <li>at 60 V rated value</li> </ul>	6 A				
• at 110 V rated value	3 A				
• at 125 V rated value	2 A				
at 220 V rated value	1 A				
• at 600 V rated value	0.15 A				
operational current at DC-13					
at 24 V rated value	10 A				
at 48 V rated value	2 A				
<ul> <li>at 60 V rated value</li> </ul>	2 A				
<ul> <li>at 110 V rated value</li> </ul>	1 A				
<ul> <li>at 125 V rated value</li> </ul>	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]					
• for single-phase AC motor					
— at 110/120 V rated value	0.33 hp				
— at 230 V rated value	1 hp				
• for 3-phase AC motor					
— 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					

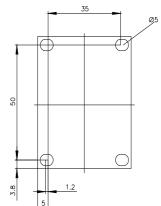
• for short-circuit protection of the main circuit			
<ul> <li>— with type of coordination 1 required</li> </ul>	gG: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)		
<ul> <li>— with type of assignment 2 required</li> </ul>	gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA)		
<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 an 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		
<ul> <li>side-by-side mounting</li> </ul>	Yes		
height	58 mm		
width	45 mm		
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		
at contactor for auxiliary contacts	Screw-type terminals		
<ul> <li>of magnet coil</li> </ul>	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 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> )		
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 (0.5 1.5 mm), 2x (0.75 2.5 mm) 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; with 3RH29		
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 %		
<ul> <li>with high demand rate according to SN 31920</li> </ul>	73 %		

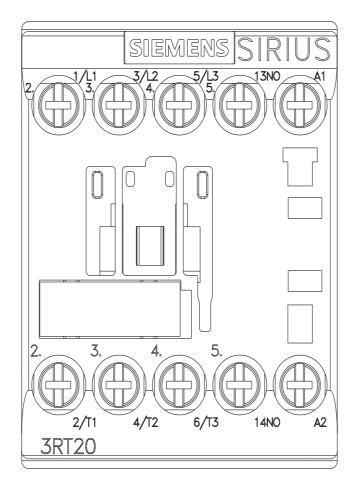
failure rate [FIT] with le	ow demand rate according	to SN 31920	100 FIT			
T1 value for proof test interval or service life according to IEC 61508		20 a				
protection class IP o	n the front according to I	EC 60529	IP20			
touch protection on	the front according to IEC	60529	finger-safe,	for vertical conta	ct from the front	
suitability for use						
<ul> <li>safety-related s</li> </ul>	-		Yes			
Certificates/ approvals	;					
General Product Ap	proval					
(SP) Em	<u>Confirmation</u>		)	UL UL	KC	EHC
EMC	Functional Safety/Safety of Ma- chinery	Declaration of	Conformity		Test Certificates	
RCM	<u>Type Examination Cer-</u> tificate	CE EG-Konf.		UK CA	<u>Type Test Certific-</u> ates/Test Report	<u>Special Test Certific-</u> ate
Marine / Shipping						
ABS	BUREAU VERITAS			Lloyd's Register us	PRS	RINA
Marine / Shipping	other				Railway	Environment
RMRS	<u>Confirmation</u>		>	<u>Confirmation</u>	Vibration and Shock	Environmental Con- firmations
Further information						

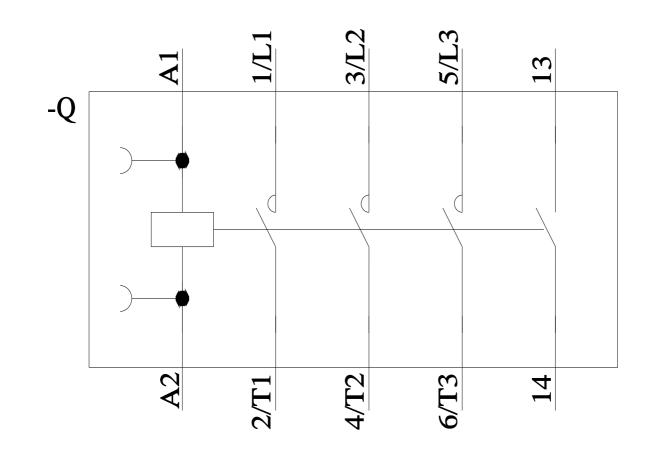
Further information
Siemens has decided to exit the Russian market (see here).
https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business
Siemens is working on the renewal of the current EAC certificates.
Please contact your local Siemens office on the status of validity of the 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
Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2016-1AK61
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2016-1AK61
Service&Support (Manuals, Certificates, Characteristics, FAQs,)
https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-1AK61
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros,)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2016-1AK61⟨=en
Characteristic: Tripping characteristics, I <sup>2</sup> t, Let-through current
https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-1AK61/char
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2016-1AK61&objecttype=14&gridview=view1











last modified:

2/10/2023 🖸