## **SIEMENS**

Data sheet 3RT2017-4AK61



power contactor, AC-3 12 A, 5.5 kW / 400 V 1 NO, 110 V AC, 50 Hz, 120 V 60 Hz, 3-pole, Size S00 ring cable lug connection

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	S00
product extension	
<ul> <li>function module for communication</li> </ul>	No
auxiliary switch	Yes
power loss [W] for rated value of the current at AC in hot operating state	3.6 W
• per pole	1.2 W
power loss [W] for rated value of the current without load current share typical	5.9 W
surge voltage resistance	
<ul> <li>of main circuit rated value</li> </ul>	6 kV
of auxiliary circuit rated value	6 kV
maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1	400 V
shock resistance at rectangular impulse	
at AC	7,3g / 5 ms, 4,7g / 10 ms
shock resistance with sine pulse	
• at AC	11,4g / 5 ms, 7,3g / 10 ms
mechanical service life (switching cycles)	
<ul> <li>of contactor typical</li> </ul>	30 000 000
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> </ul>	5 000 000
<ul> <li>of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000
reference code acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	01.10.2009 00:00:00
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature during operation	-25 +60 °C
ambient temperature during storage	-55 +80 °C
Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage at AC-3 rated value maximum	690 V

operational current	
<ul> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> </ul>	22 A
• at AC-1	
<ul> <li>up to 690 V at ambient temperature 40 °C rated value</li> </ul>	22 A
— up to 690 V at ambient temperature 60 $^{\circ}$ C rated value	20 A
• at AC-3	
— at 400 V rated value	12 A
— at 500 V rated value	9.2 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	9.9 A
• at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	7.2 A
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	7.2 A
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	7.2 A
<ul> <li>up to 690 V for current peak value n=20 rated value</li> <li>at AC-6a</li> </ul>	6.7 A
— up to 230 V for current peak value n=30 rated	4.8 A
value	4.8 A
<ul> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated</li> </ul>	4.8 A
value  — up to 690 V for current peak value n=30 rated  — up to 690 V for current peak value n=30 rated	4.8 A
value  minimum cross-section in main circuit at maximum AC-1	4 mm <sup>2</sup>
rated value	4 111111
operational current for approx. 200000 operating cycles at AC-4	
<ul> <li>at 400 V rated value</li> </ul>	4.1 A
at 690 V rated value	3.3 A
operational current	
<ul><li>at 1 current path at DC-1</li></ul>	
— at 24 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 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 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
operational current	
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	20 A

— at 110 V rated value	0.1 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 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 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	3 kW		
— at 400 V rated value	5.5 kW		
— at 500 V rated value	5.5 kW		
— at 690 V rated value	5.5 kW		
operating power for approx. 200000 operating cycles at AC-4			
• at 400 V rated value	2 kW		
at 690 V rated value	2.5 kW		
operating apparent power at AC-6a			
• up to 230 V for current peak value n=20 rated value	2.8 kV·A		
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	4.9 kV·A		
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	6.2 kV·A		
<ul> <li>up to 690 V for current peak value n=20 rated value</li> </ul>	8 kV·A		
operating apparent power at AC-6a			
<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	1.9 kV·A		
<ul> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	3.3 kV·A		
<ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	4.1 kV·A		
• up to 690 V for current peak value n=30 rated value	5.7 kV·A		
short-time withstand current in cold operating state up to 40 °C			
<ul> <li>limited to 1 s switching at zero current maximum</li> </ul>	200 A; Use minimum cross-section acc. to AC-1 rated value		
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	123 A; Use minimum cross-section acc. to AC-1 rated value		
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	96 A; Use minimum cross-section acc. to AC-1 rated value		
<ul> <li>limited to 30 s switching at zero current maximum</li> </ul>	74 A; Use minimum cross-section acc. to AC-1 rated value		
<ul> <li>limited to 60 s switching at zero current maximum</li> </ul>	61 A; Use minimum cross-section acc. to AC-1 rated value		
no-load switching frequency			
• at AC	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-4 maximum	250 1/h		
Control circuit/ Control			
type of voltage of the control supply voltage	AC		
control supply voltage at AC			
<ul> <li>at 50 Hz rated value</li> </ul>	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	0.8 1.1		
• at 60 Hz	0.8 1.1		
apparent pick-up power of magnet coil at AC			
• at 50 Hz	36 V·A		
• at 60 Hz	36 V·A		
inductive power factor with closing power of the coil			
● at 50 Hz	0.8		
● at 60 Hz	0.8		

apparent holding power of magnet coil at AC  • at 50 Hz  • at 60 Hz  inductive power factor with the holding power of the coil  • at 50 Hz  • at 60 Hz  • at AC  • at AC  opening delay  • at AC  arcing time  control version of the switch operating mechanism  Auxilliary circuit  number of NO contacts for auxillary contacts instantaneous contact  operational current at AC-12 maximum  operational current at AC-15  • at 230 V rated value • at 500 V rated value • at 500 V rated value • at 600 V rated value • at 60 V rated value • at 10 V rated value • at 60 V rated value • at 10 V rated value • at 10 V rated value • at 25 V rated value • at 25 V rated value • at 30 V rated value • at 48 V rated value • at 30 V rated value • at 20 V rated value • at 30 V rated value • at 30 V rated value • at 60 V rated value		
● at 60 Hz  inductive power factor with the holding power of the coll  ● at 50 Hz  ● at 60 Hz  ● at 60 Hz  ● at AC  opening delay  ● at AC  arcing time  control version of the switch operating mechanism  Auxiliary circuit  number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum  operational current at AC-15  ● at 230 V rated value ● at 400 V rated value ● at 690 V rated value ● at 690 V rated value ● at 48 V rated value ● at 48 V rated value ● at 40 V rated value ● at 40 V rated value ● at 40 V rated value ● at 690 V rated value ● at 125 V rated value ● at 220 V rated value ● at 600 V rated value		
inductive power factor with the holding power of the coil		
coil		
■ at 50 Hz     ■ at 60 Hz     Closing delay     ■ at AC		
■ at 60 Hz     closing delay     ■ at AC		
closing delay          • at AC       8 33 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       15 ms         number of NO contacts for auxiliary contacts instantaneous contact       1         operational current at AC-12 maximum       10 A         operational current at AC-15       10 A         • at 230 V rated value       3 A         • at 500 V rated value       2 A         • at 690 V rated value       1 A         operational current at DC-12       10 A         • at 24 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       1 A         • at 220 V rated value       2 A         • at 220 V rated value       1 A         • at 600 V rated value       1 A         • at 600 V rated value       1 A          • at 600 V rated value       1 A		
● at AC  opening delay ● at AC  arcing time  control version of the switch operating mechanism  Auxiliary circuit  number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum  operational current at AC-15 ● at 230 V rated value ● at 400 V rated value ● at 690 V rated value ● at 690 V rated value ● at 44 V rated value ● at 48 V rated value ● at 60 V rated value ● at 110 V rated value ● at 125 V rated value ● at 125 V rated value ● at 125 V rated value ● at 220 V rated value ● at 600 V rated value		
■ at AC		
■ at AC		
control version of the switch operating mechanism  Standard A1 - A2  Auxiliary circuit  number of NO contacts for auxiliary contacts instantaneous contact  operational current at AC-12 maximum  operational current at AC-15  • at 230 V rated value  • at 400 V rated value  • at 500 V rated value  • at 690 V rated value  • at 24 V rated value  • at 24 V rated value  • at 48 V rated value  • at 48 V rated value  • at 60 V rated value  • at 60 V rated value  • at 110 V rated value  • at 125 V rated value  • at 220 V rated value  • at 200 V rated value  • at 600 V rated value		
Auxiliary circuit         number of NO contacts for auxiliary contacts instantaneous contact       1         operational current at AC-12 maximum       10 A         operational current at AC-15       10 A         • at 230 V rated value       3 A         • at 500 V rated value       2 A         • at 690 V rated value       1 A         operational current at DC-12       10 A         • at 24 V rated value       6 A         • at 60 V rated value       6 A         • at 110 V rated value       3 A         • at 125 V rated value       2 A         • at 220 V rated value       1 A         • at 220 V rated value       1 A         • at 600 V rated value       2 A         • at 220 V rated value       1 A         • at 600 V rated value       1 A		
number of NO contacts for auxiliary contacts instantaneous contact       1         operational current at AC-12 maximum       10 A         operational current at AC-15       10 A         • at 230 V rated value       3 A         • at 500 V rated value       2 A         • at 690 V rated value       1 A         operational current at DC-12       10 A         • at 24 V rated value       6 A         • at 48 V rated value       6 A         • at 10 V rated value       3 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       1 A         • at 600 V rated value       2 A         • at 600 V rated value       1 A		
instantaneous contact operational current at AC-12 maximum  operational current at AC-15  • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value • at 690 V rated value  10 A  operational current at DC-12  • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value		
operational current at AC-15		
<ul> <li>at 230 V rated value</li> <li>at 400 V rated value</li> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>1 A</li> <li>operational current at DC-12</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> </ul>		
<ul> <li>at 400 V rated value</li> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>1 A</li> <li>operational current at DC-12</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> </ul>		
<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>1 A</li> <li>operational current at DC-12</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul>		
<ul> <li>at 690 V rated value</li> <li>operational current at DC-12</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul>		
operational current at DC-12         • at 24 V rated value       10 A         • at 48 V rated value       6 A         • at 60 V rated value       6 A         • at 110 V rated value       3 A         • at 125 V rated value       2 A         • at 220 V rated value       1 A         • at 600 V rated value       0.15 A		
<ul> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul>		
<ul> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>0.15 A</li> </ul>		
<ul> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>0.15 A</li> </ul>		
<ul> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>0.15 A</li> </ul>		
<ul> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>0.15 A</li> </ul>		
<ul> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>0.15 A</li> </ul>	3 A	
at 600 V rated value     0.15 A	2 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		
	1 A	
	0.9 A	
	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 11 A		
• at 600 V rated value  11 A		
yielded mechanical performance [hp]		
• for single-phase AC motor		
— at 110/120 V rated value 0.5 hp		
— at 230 V rated value 2 hp		
• for 3-phase AC motor		
— at 200/208 V rated value 3 hp		
— at 220/230 V rated value 3 hp		
<ul> <li>— at 460/480 V rated value</li> <li>— at 575/600 V rated value</li> <li>10 hp</li> </ul>		
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  with type of coordination 1 required  a.G.: 50A (600V 100kA), a.M.: 20A (600V 100kA), BS88: 35A (415)		
<ul> <li>— with type of coordination 1 required</li> <li>— with type of assignment 2 req</li></ul>	/ 90ka)	

required		
stallation/ mounting/ dimensions		
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface	
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715	
side-by-side mounting	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	
onnections/ Terminals		
type of electrical connection		
for main current circuit	Ring cable lug connection	
for auxiliary and control circuit	ring cable connection	
<ul> <li>at contactor for auxiliary contacts</li> </ul>	Ring cable lug connection	
of magnet coil	Ring cable lug connection	
afety related data		
B10 value with high demand rate acc. to SN 31920	1 000 000	
proportion of dangerous failures		
with low demand rate acc. to SN 31920	40 %	
<ul> <li>with high demand rate acc. to SN 31920</li> </ul>	73 %	
failure rate [FIT] with low demand rate acc. to SN 31920	100 FIT	
product function		
mirror contact acc. to IEC 60947-4-1	Yes; with 3RH29	
T1 value for proof test interval or service life acc. to IEC 61508	20 y	
protection class IP on the front acc. to IEC 60529	IP00	
suitability for use safety-related switching OFF	Yes	
ertificates/ approvals		
General Product Approval	EMC	







<u>KC</u>





Declaration of Conformity	Test Certificates	Marine / Shipping
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**Miscellaneous** 

Special Test Certificate Type Test
Certificates/Test
Report





Marine / Shipping other











Confirmation

other



Confirmation

## **Further information**

Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2017-4AK61

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2017-4AK61

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-4AK61

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

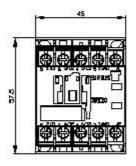
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2017-4AK61&lang=en

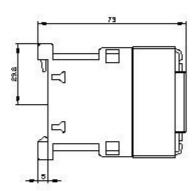
Characteristic: Tripping characteristics, I2t, Let-through current

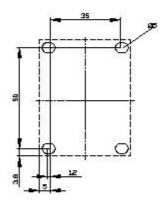
https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-4AK61/char

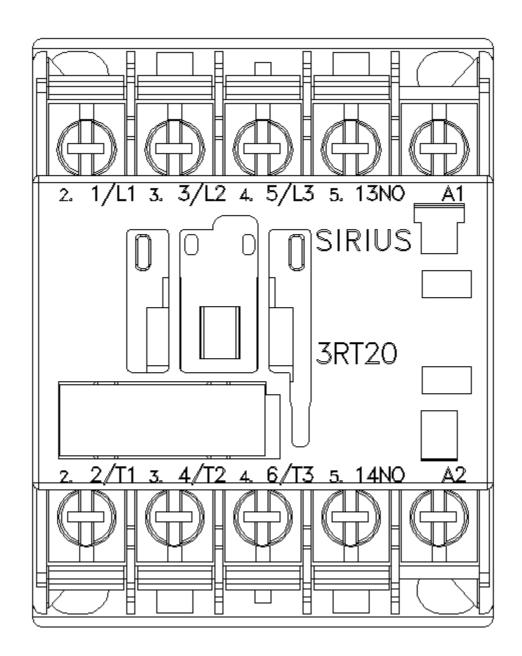
Further characteristics (e.g. electrical endurance, switching frequency)

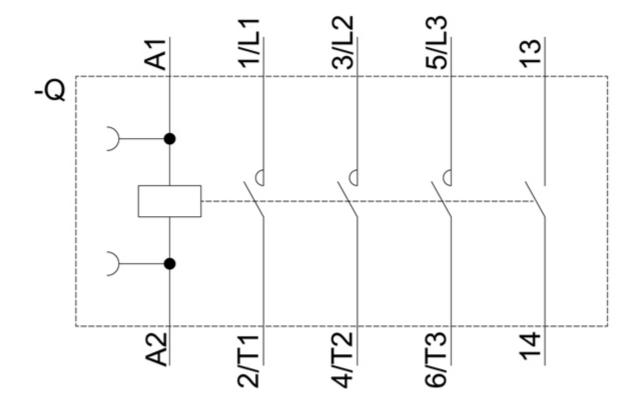
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2017-4AK61&objecttype=14&gridview=view1











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