SIEMENS

Data sheet

3RT2018-4AN61



Power contactor, AC-3 16 A, 7.5 kW / 400 V 1 NO, 200 V AC, 50 Hz 200-220 V, 60Hz, 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	
 function module for communication 	No
auxiliary switch	Yes
power loss [W] for rated value of the current at AC in hot operating state	6.6 W
• per pole	2.2 W
power loss [W] for rated value of the current without load current share typical	6.5 W
surge voltage resistance	
 of main circuit rated value 	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)	
 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 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	
• at AC-1 at 400 V at ambient temperature 40 °C	22 A
rated 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 $^\circ \mathrm{C}$ rated value	20 A
• at AC-3	
— at 400 V rated value	16 A
— at 500 V rated value	12.4 A
— at 690 V rated value	8.9 A
 at AC-4 at 400 V rated value 	11.5 A
 at AC-5a up to 690 V rated value 	19.4 A
 at AC-5b up to 400 V rated value at AC-6a 	13.2 A
— up to 230 V for current peak value n=20 rated value	9.6 A
 up to 400 V for current peak value n=20 rated value 	9.6 A
 up to 500 V for current peak value n=20 rated value 	9.6 A
 — up to 690 V for current peak value n=20 rated value at AC-6a 	8.9 A
— up to 230 V for current peak value n=30 rated value	6.6 A
 up to 400 V for current peak value n=30 rated value 	6.4 A
 up to 500 V for current peak value n=30 rated value 	6.4 A
 — up to 690 V for current peak value n=30 rated value 	6.4 A
minimum cross-section in main circuit at maximum AC-1 rated value	4 mm ²
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	5.5 A
• at 690 V rated value	4.4 A
operational current	
 at 1 current path at DC-1 	
— 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
 with 2 current paths in series at DC-1 	
— 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
 with 3 current paths in series at DC-1 	
	20 A
— at 24 V rated value	2071
— at 24 V rated value — at 110 V rated value	20 A
— at 110 V rated value	20 A
— at 110 V rated value — at 220 V rated value	20 A 20 A
 — at 110 V rated value — at 220 V rated value — at 440 V rated value 	20 A 20 A 1.3 A
 at 110 V rated value at 220 V rated value at 440 V rated value at 600 V rated value 	20 A 20 A 1.3 A

— at 110 V rated value	0.1 A
 with 2 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	20 A
— at 110 V rated value	0.35 A
 with 3 current paths in series at DC-3 at DC-5 	
— 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	4 kW
— at 400 V rated value	7.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	7.5 kW
operating power for approx. 200000 operating cycles	
at AC-4	
• at 400 V rated value	2.5 kW
• at 690 V rated value	3.5 kW
operating apparent power at AC-6a	
• up to 230 V for current peak value n=20 rated value	3.8 kV·A
• up to 400 V for current peak value n=20 rated value	6.6 kV·A
• up to 500 V for current peak value n=20 rated value	8.3 kV·A
 up to 690 V for current peak value n=20 rated value 	10.6 kV·A
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	2.5 kV·A
• up to 400 V for current peak value n=30 rated value	4.4 kV·A
• up to 500 V for current peak value n=30 rated value	5.5 kV·A
• up to 690 V for current peak value n=30 rated value	7.6 kV·A
short-time withstand current in cold operating state	
up to 40 °C	
 limited to 1 s switching at zero current maximum 	300 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	169 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	128 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	92 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 60 s switching at zero current maximum 	74 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	
• at 50 Hz rated value	200 V
• at 60 Hz rated value	220 V
operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 1.1
• at 60 Hz	0.85 1.1
apparent pick-up power of magnet coil at AC	
• at 50 Hz	36 V·A
• at 60 Hz	43 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	5.9 V·A
• at 60 Hz	6.5 V·A
inductive power factor with the holding power of the coil	
● at 50 Hz	0.24
• at 60 Hz	0.25
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	
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-15	
• at 230 V rated value	10 A
• at 400 V rated value	3 A
• at 500 V rated value	2 A
at 690 V rated value	1 A
operational current at DC-12	
• at 24 V rated value	10 A
 at 48 V rated value 	6 A
at 60 V rated value	6 A
at 110 V rated value	3 A
at 125 V rated value	2 A
at 220 V rated value	1A
at 600 V rated value	0.15 A
operational current at DC-13	40.4
• at 24 V rated value	10 A
at 48 V rated value	2 A 2 A
• at 60 V rated value	2 A 1 A
 at 110 V rated value at 125 V rated value 	0.9 A
	0.3 A
 at 220 V rated value 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	Tradity switching per 100 million (17 V, ThiA)
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	14 A
at 600 V rated value	11 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	1 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	5 hp
— at 460/480 V rated value	10 hp
— at 575/600 V rated value	10 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	
— with type of coordination 1 required	gG: 50A (690V,100kA), aM: 25A (690V,100kA), BS88: 50A (415V,80kA)
— with type of assignment 2 required	gG: 25A (690V,100kA), aM: 20A (690V,100kA), BS88: 25A (415V,80kA)

• for short-circuit protection of the auxiliary switch required

nstallation/ mounting/ dimensions					
mounting position		+/-180° rotation possible on forward and backward by +/	ice; can be tilted nting 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					
width	45 mm				
depth		73 mm			
required spacing					
 with side-by-side mounting 					
— forwards		10 mm			
— upwards		10 mm			
— downwards		10 mm			
— at the side		0 mm			
 for grounded parts 					
— 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		Ring cable lug connection			
for auxiliary and control circuit		ring cable tog connection			
at contactor for auxiliary contacts		Ring cable lug connection			
 at contactor for auxiliary contacts of magnet coil 		Ring cable lug connection			
Safety related data		Ring cable lug connection			
B10 value with high demand rate acc. to SN	31020	1 000 000			
	51520	1 000 000			
 proportion of dangerous failures with low demand rate acc. to SN 31920 		40 %			
		73 %			
with high demand rate acc. to SN 31920 failure rate [FIT] with low demand rate acc. to SN 31920		100 FIT			
product function	0 311 31920	100111			
-		Ves: with 3RH20			
mirror contact acc. to IEC 60947-4-1 T1 value for proof test interval or service life acc. to		Yes; with 3RH29 20 y			
IEC 61508 protection class IP on the front acc. to IEC	C 60529	IP00			
suitability for use safety-related switching OF		Yes			
Certificates/ approvals					
General Product Approval				EMC	
	(h) u	<u>KC</u>	EAC	RCM	
Declaration of Conformity	Test Certifica	ates	Marine / Shipping		

CE EG-Konf.	<u>Miscellaneous</u>	<u>Type Test</u> <u>Certificates/Test</u> <u>Report</u>	<u>Special Test</u> <u>Certificate</u>	ABS	BUREAU VERITAS
Marine / Shipping					other
Lloyds Register urs	PRS	RINA	KARS	DNV-GL Event.com	<u>Confirmation</u>
other					
	<u>Confirmation</u>				
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=3RT2018-4AN61

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2018-4AN61

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

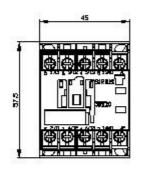
https://support.industry.siemens.com/cs/ww/en/ps/3RT2018-4AN61

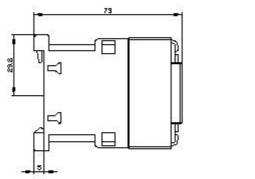
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2018-4AN61&lang=en

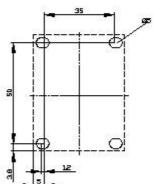
Characteristic: Tripping characteristics, I2t, Let-through current

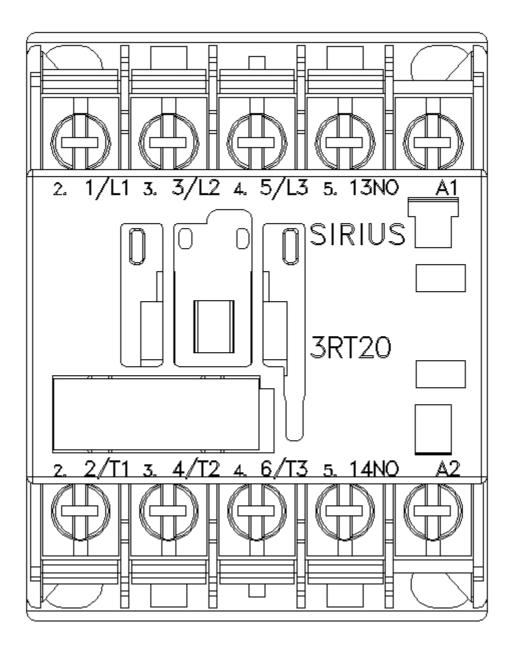
https://support.industry.siemens.com/cs/ww/en/ps/3RT2018-4AN61/char

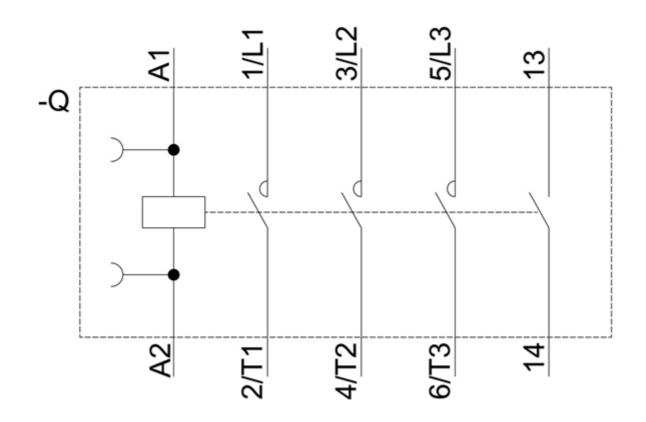
Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2018-4AN61&objecttype=14&gridview=view1











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