SIEMENS

Data sheet

3RT2017-2AK61



power contactor, AC-3e/AC-3, 12 A, 5.5 kW / 400 V, 1 NO, 110 V AC, 50 Hz, 120 V 60 Hz, 3-pole, frame size S00 spring-loaded terminal

product brand name SIRUS product designation 2RT2 General technical data S00 size of contactor S00 product systemsion No • function module for communication No • auxiliary switch Yes • at AC in hot operating state 1.5 W • at AC in hot operating state per pole 0.5 W • without load current share typical 5.9 W • of main 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 with degree of pollution 3 rated value 64 V • of main circuit with degree of pollution 3 rated value 64 V • of main circuit with degree of pollution 9 rated 64 V • of main circuit with degree of pollution 9 rated 64 V • of main circuit with degree of pollution 9 rated 64 V • of auxiliary circuit rated value 64 V • of auxiliary circuit with degree of pollution 9 rated 90 V • of auxiliary switch biot kypical 63 00 V • of auxiliary circuit with adegree 90 V <td< th=""><th>075 100 A</th><th></th></td<>	075 100 A	
product type designation 3RT2 General technical data	product brand name	SIRIUS
size of contactor S00 product extension No • function module for communication No • auxiliary switch Yes power loss [W] for rated value of the current • at AC in hot operating state 1.5 W • at AC in hot operating state per pole 0.5 W • without load current share typical 5.9 W • of main circuit with degree of pollution 3 rated value 690 V 690 V 690 V • of main circuit with degree of pollution 3 rated value 690 V 690 V 690 V • of auxiliary circuit with degree of pollution 3 rated value 64 V 64 V 690 V 600 V • of auxiliary circuit rated value 6 kV 600 V 600 V 600 V 600 V • of auxiliary circuit rated value 6 kV 600 V 600 V 600 V 600 V • of auxiliary circuit rated value 6 kV 6 kV 600 V 600 V 600 V • of auxiliary circuit rated value 6 kV 6 kV<	product designation	Power contactor
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relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 95 % maximum 95 %	 during operation 	
relative humidity at 55 °C according to IEC 60068-2-30 95 %	 during storage 	
maximum		
Main circuit		95 %
	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 \
at AC-3e rated value maximum	690 \
operational current • at AC-1 at 400 V at ambient temperature 40 °C	22 A
rated value	22 A
● at AC-1	
— up to 690 V at ambient temperature 40 °C	22 A
rated value	
— up to 690 V at ambient temperature 60 °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-3e	
— 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 / 9.9 A
 at AC-5b up to 400 V rated value at AC-6a 	9.9 A
 at AC-ba up to 230 V for current peak value n=20 rated 	7.2 A
value	1.2 1
— up to 400 V for current peak value n=20 rated value	7.2 A
— up to 500 V for current peak value n=20 rated value	7.2 A
— up to 690 V for current peak value n=20 rated	6.7 A
value	0.77
• at AC-6a	
— up to 230 V for current peak value n=30 rated	4.8 A
value — up to 400 V for current peak value n=30 rated	4.8 A
value — up to 500 V for current peak value n=30 rated	4.8 A
value — 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
rated 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	00 4
— at 24 V rated value — at 110 V rated value	20 A 2.1 A
— at 220 V rated value	2.1 A 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 — at 24 V rated value	20 A
— at 24 V rated value — at 110 V rated value	20 A 20 A
— at 220 V rated value	20 A 20 A
— at 440 V rated value	1.3 A

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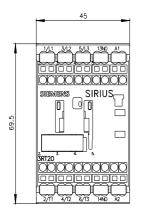
— at 600 V rated value	1 A
• at 1 current path at DC-3 at DC-5	22.4
— at 24 V rated value	20 A
— at 110 V rated value	0.15 A
• with 2 current paths in series at DC-3 at DC-5	00.4
— at 24 V rated value	20 A
— at 110 V rated value	0.35 A
• with 3 current paths in series at DC-3 at DC-5	22.4
— at 24 V rated 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 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
• at AC-3e	0.0 KW
• 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 kVA
 up to 400 V for current peak value n=20 rated value 	4.9 kVA
 up to 500 V for current peak value n=20 rated value 	6.2 kVA
 up to 690 V for current peak value n=20 rated value 	8 kVA
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	1.9 kVA
• up to 400 V for current peak value n=30 rated value	3.3 kVA
• up to 500 V for current peak value n=30 rated value	4.1 kVA
• up to 690 V for current peak value n=30 rated value	5.7 kVA
short-time withstand current in cold operating state up to 40 °C	
 limited to 1 s switching at zero current maximum 	200 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	123 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	96 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	74 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 60 s switching at zero current maximum 	61 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at AC	10 000 1/h
operating frequency	
	1 000 1/h
 at AC-1 maximum 	
 at AC-1 maximum at AC-2 maximum 	750 1/h
• at AC-2 maximum	750 1/h
at AC-2 maximumat AC-3 maximum	750 1/h 750 1/h
 at AC-2 maximum at AC-3 maximum at AC-3e maximum 	750 1/h 750 1/h 750 1/h
 at AC-2 maximum at AC-3 maximum at AC-3e maximum at AC-4 maximum 	750 1/h 750 1/h 750 1/h
 at AC-2 maximum at AC-3 maximum at AC-3e maximum at AC-3e maximum at AC-4 maximum Control circuit/ Control type of voltage of the control supply voltage control supply voltage at AC	750 1/h 750 1/h 750 1/h 250 1/h
 at AC-2 maximum at AC-3 maximum at AC-3e maximum at AC-3e maximum at AC-4 maximum Control circuit/ Control type of voltage of the control supply voltage	750 1/h 750 1/h 750 1/h 250 1/h
 at AC-2 maximum at AC-3 maximum at AC-3e maximum at AC-3e maximum at AC-4 maximum Control circuit/ Control type of voltage of the control supply voltage control supply voltage at AC at 50 Hz rated value at 60 Hz rated value 	750 1/h 750 1/h 750 1/h 250 1/h AC
 at AC-2 maximum at AC-3 maximum at AC-3e maximum at AC-3e maximum at AC-4 maximum Control circuit/ Control type of voltage of the control supply voltage control supply voltage at AC at 50 Hz rated value at 60 Hz rated value operating range factor control supply voltage rated 	750 1/h 750 1/h 750 1/h 250 1/h AC 110 V
 at AC-2 maximum at AC-3 maximum at AC-3 e maximum at AC-3e maximum at AC-4 maximum Control circuit/ Control type of voltage of the control supply voltage control supply voltage at AC at 50 Hz rated value at 60 Hz rated value operating range factor control supply voltage rated value of magnet coil at AC 	750 1/h 750 1/h 750 1/h 250 1/h AC 110 V 120 V
 at AC-2 maximum at AC-3 maximum at AC-3e maximum at AC-3e maximum at AC-4 maximum Control circuit/ Control type of voltage of the control supply voltage control supply voltage at AC at 50 Hz rated value at 60 Hz rated value operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz 	750 1/h 750 1/h 750 1/h 250 1/h AC 110 V 120 V 0.8 1.1
 at AC-2 maximum at AC-3 maximum at AC-3e maximum at AC-4e maximum at AC-4 maximum Control circuit/ Control type of voltage of the control supply voltage control supply voltage at AC at 50 Hz rated value at 60 Hz rated value operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz at 50 Hz at 60 Hz 	750 1/h 750 1/h 750 1/h 250 1/h AC 110 V 120 V
 at AC-2 maximum at AC-3 maximum at AC-3e maximum at AC-3e maximum at AC-4 maximum Control circuit/ Control type of voltage of the control supply voltage control supply voltage at AC at 50 Hz rated value at 60 Hz rated value operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz 	750 1/h 750 1/h 750 1/h 250 1/h AC 110 V 120 V 0.8 1.1

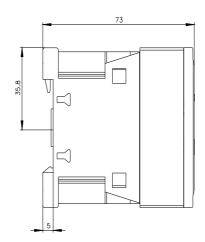
• at 60 Hz	36 VA			
inductive power factor with closing power of the coil				
• at 50 Hz	0.8			
• at 60 Hz	0.8			
apparent holding power of magnet coil at AC				
• at 50 Hz	5.9 VA			
• at 60 Hz	5.9 VA			
inductive power factor with the holding power of the				
coil				
• at 50 Hz	0.24			
• at 60 Hz	0.24			
closing delay	0.05			
• 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 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 	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			
 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	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			
— at 460/480 V rated value	7.5 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: 20A (690V,100kA), BS88: 35A (415V,80kA)			
 — with type of assignment 2 required 				
	gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V,			
 for short-circuit protection of the auxiliary switch 	gG: 20A (690V,100KA), am: 16A (690V, 100KA), BS88: 20A (415V, 80kA) gG: 10 A (500 V, 1 kA)			

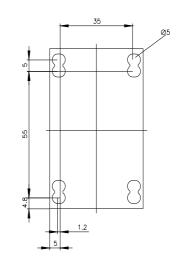
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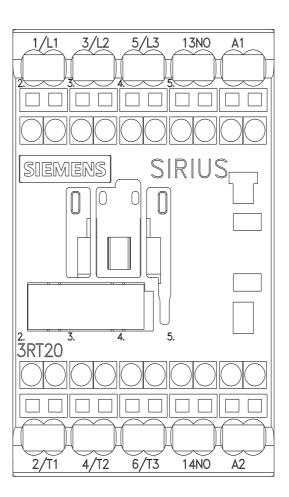
required			
Installation/ mounting/ dimensions			
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface		
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715		
 side-by-side mounting 	Yes		
height	70 mm		
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		
— forwards — upwards	10 mm 10 mm		
— upwards — downwards	10 mm		
— at the side			
	6 mm		
Connections/ Terminals			
type of electrical connection			
• for main current circuit	spring-loaded terminals		
for auxiliary and control circuit	spring-loaded terminals		
at contactor for auxiliary contacts	Spring-type terminals		
of magnet coil turns of compositions	Spring-type terminals		
type of connectable conductor cross-sections • for main contacts			
- solid	2x (0.5 4 mm²)		
— solid or stranded	2x (0.5 4 mm ²)		
 finely stranded with core end processing 	2x (0.5 2.5 mm ²)		
 finely stranded with one one processing finely stranded without core end processing 	2x (0.5 2.5 mm ²)		
at AWG cables for main contacts	2x (20 12)		
connectable conductor cross-section for main			
contacts			
• solid	0.5 4 mm²		
 stranded 	0.5 4 mm²		
 finely stranded with core end processing 	0.5 2.5 mm²		
 finely stranded without core end processing 	0.5 2.5 mm ²		
connectable conductor cross-section for auxiliary contacts			
solid or stranded	0.5 4 mm ²		
 finely stranded with core end processing 	0.5 2.5 mm ²		
 finely stranded without core end processing 	0.5 2.5 mm²		
type of connectable conductor cross-sections			
for auxiliary contacts			
— solid or stranded	$2x (0.5 \dots 4 \text{ mm}^2)$		
 finely stranded with core end processing 	$2x (0.5 \dots 2.5 \text{ mm}^2)$		
 finely stranded without core end processing at AWG cables for auxiliary contacts 	2x (0.5 2.5 mm ²)		
 at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section 	2x (20 12)		
for main contacts	20 12		
for auxiliary contacts	20 12		
Safety related data			
product function			
 mirror contact according to IEC 60947-4-1 	Yes; with 3RH29		
B10 value with high demand rate according to SN 31920	1 000 000		
J			

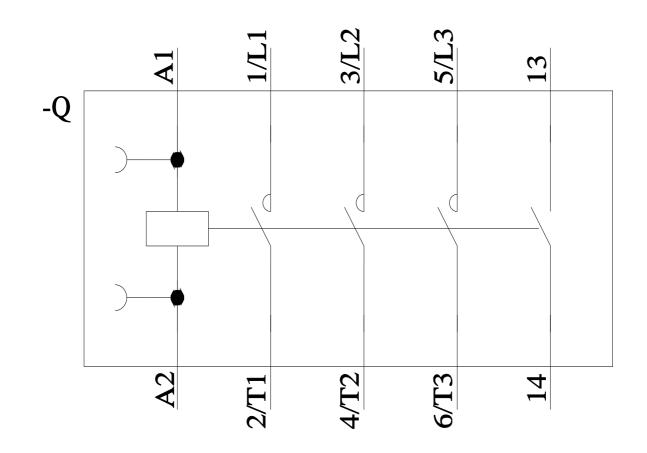
 with high demain 	rous failures Id rate according to SN Ind rate according to SN Iow demand rate accord	31920	40 % 73 % 100 FIT		
T1 value for proof test interval or service life according to IEC 61508		20 у			
	on the front according	to IEC	IP20		
touch protection on suitability for use	the front according to	DIEC 60529	finger-safe, for vertical cont	tact from the front	
 safety-related s 			Yes		
Certificates/ approval General Product Ap		_			
(SP)		<u>Confirmatio</u>		<u>KC</u>	EHC
EMC	Functional Safety/Safety of Machinery	Declaration o	f Conformity	Test Certificates	
RCM	<u>Type Examination</u> <u>Certificate</u>	UK CA	CE EG-Konf.	Type Test Certific- ates/Test Report	Special Test Certific- ate
Marine / Shipping					
ABS	BUREAU VERITAS		Lloyds Register urs	PRS	RINA
Marine / Shipping	other			Railway	
RMRS	<u>Confirmation</u>	DE	Confirmation	Vibration and Shock	
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Image database (pro http://www.automation Characteristic: Tripp https://support.industr Further characterist	Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros,) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2017-2AK61⟨=en Characteristic: Tripping characteristics, I ² t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-2AK61/char Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2017-2AK61&objecttype=14&gridview=view1				











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