## SIEMENS

## Data sheet

## 3RT2018-2AK62



power contactor, AC-3e/AC-3, 7.5 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         SIRIUS           product designation         SRT2           Central technical data         SRT2           General technical data         Size of contactor           size of contactor         S00           product stype designation         No           • auxiliary switch         Yes           opwore loss [W] for rated value of the current         3 W           • at AC in hot operating state per pole         1 W           • at AC in hot operating state per pole         1 W           • of main circuit with degree of pollution 3 rated value         690 V           • of main circuit with degree of pollution 3 rated value         64V           • of main circuit with degree of pollution 3 rated value         64V           • of main circuit with degree of pollution 9 rated         64V           • of main circuit with degree of pollution 9 rated         64V           • of main circuit with degree of pollution 9 rated         64V           • of main circuit rated value         6 kV           • of auxiliary circuit rated value         6 kV           • at AC         7,3g / 5 ms, 7,3g / 10 ms           machancial service life (switching cycles)         30 000 000           • of the contactor tybical         9 000 000           • of the contactor tybical<		
product type designation         3RT2           General technical data	product brand name	SIRIUS
General lechnical data     S00       size of contactor product extension     No       • function module for communication     No       • auxiliary switch     Yes       power loss [W] for rated value of the current     3 W       • at AC in hot operating state     3 W       • at AC in hot operating state per pole     1 W       • without load current share typical     5.9 W       insulation voltage     690 V       • of main circuit with degree of pollution 3 rated value     690 V       • of anain circuit with degree of pollution 3 rated value     690 V       • of anain circuit rated value     6 kV       • of anain circuit rated value     6 kV       • of auxiliary switch block typical     7.3g / 5 ms, 4.7g / 10 ms       machanical service life (switching 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 1000       • of the contactor with added auxiliary switch block typical     10 000 1000       • of the	product designation	Power contactor
size of contactor     S00       product extension     No       • function module for communication     No       • auxiliary switch     Yes       power loss [W] for rated value of the current     3 W       • at AC in hot operating state     3 W       • at AC in hot operating state per pole     1 W       • without load current share typical     5.9 W       insulation voltage     600 V       • of main circuit with degree of pollution 3 rated value     600 V       • of main circuit with degree of pollution 3 rated value     600 V       • of auxiliary circuit with degree of pollution 3 rated value     64 V       • of main circuit rated value     6 kV       • of auxiliary since for soff isolation between coil and main contacts according to EN 6087-11     400 V       shock resistance at rectangular impulse     11,4g / 5 ms, 7,3g / 10 ms       • at AC     11,4g / 5 ms, 7,3g / 10 ms       mechanical service life (switching cycles)     500 000       • 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 t	product type designation	3RT2
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         3 W           • at AC in hot operating state propie         1 W           • at AC in hot operating state propie         5.9 W           • of nain 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 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         6 KV           • of main contrates according to EN 60947-1         600 V           shock resistance at rectangular impulse         6 KV           • at AC         7,3g / 5 ms, 4,7g / 10 ms           • at AC         7,3g / 5 ms, 7,3g / 10 ms           • of the contactor with added auxiliary switch block 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         2 000 m <th>General technical data</th> <th></th>	General technical data	
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ambient temperature       -25 +60 °C         • 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       95 %	Ambient conditions	
• during operation       -25 +60 °C         • during storage       -55 +80 °C         relative humidity minimum       10 %         relative humidity at 55 °C according to IEC 60068-2-30 maximum       95 %	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 %	ambient temperature	
relative humidity minimum     10 %       relative humidity at 55 °C according to IEC 60068-2-30     95 %       maximum     95 %	during operation	-25 +60 °C
relative humidity at 55 °C according to IEC 60068-2-30 95 %	<ul> <li>during storage</li> </ul>	-55 +80 °C
maximum	relative humidity minimum	10 %
Main circuit		95 %
	Main circuit	

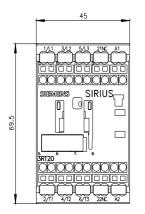
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	
at AC-3 rated value maximum	690 V
at AC-3e rated value maximum	690 V
operational current	00.4
<ul> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> </ul>	22 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C	22 A
rated value	
— up to 690 V at ambient temperature 60 °C	20 A
rated value	
• 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-3e	16 A
— at 400 V rated value — at 500 V rated value	10 A 12.4 A
— at 500 V rated value	12.4 A 8.9 A
<ul> <li>at AC-4 at 400 V rated value</li> </ul>	0.9 A 11.5 A
<ul> <li>at AC-5a up to 690 V rated value</li> </ul>	19.4 A
<ul> <li>at AC-5b up to 400 V rated value</li> </ul>	13.2 A
• at AC-6a	10.27
— up to 230 V for current peak value n=20 rated	9.6 A
value	01071
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	9.6 A
— up to 500 V for current peak value n=20 rated	9.6 A
value	0.07.
<ul> <li>— up to 690 V for current peak value n=20 rated value</li> </ul>	8.9 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated	6.6 A
value	01071
— up to 400 V for current peak value n=30 rated	6.4 A
value — up to 500 V for current peak value n=30 rated	6.4 A
value	
— 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 <sup>2</sup>
operational current for approx. 200000 operating	
cycles at AC-4	
• at 400 V rated value	5.5 A
<ul> <li>at 690 V rated value</li> </ul>	4.4 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
with 2 current paths in series at DC-1	20.4
— at 24 V rated value — at 110 V rated value	20 A 12 A
— at 220 V rated value	12 A 1.6 A
— at 440 V rated value	0.8 A
— at 600 V rated value	0.8 A 0.7 A
• with 3 current paths in series at DC-1	0.17
— 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

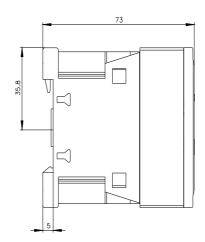
— at 600 V rated value	1 A
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	20 A
— at 110 V rated value	0.15 A
• with 2 current paths in series at DC-3 at DC-5	
— at 24 V rated value	20 A
— at 110 V rated value	0.35 A
• with 3 current paths in series at DC-3 at DC-5	
— at 24 V rated value	20 A
— at 110 V rated value	20 A
— at 220 V rated value	1.5 A
— at 440 V rated value	0.2 A 0.2 A
— at 600 V rated value	0.2 A
operating power • at AC-3	
• 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
• at AC-3e	
— 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	
<ul> <li>at 400 V rated value</li> </ul>	2.5 kW
<ul> <li>at 690 V rated value</li> </ul>	3.5 kW
operating apparent power at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	3.8 kVA
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	6.6 kVA
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	8.3 kVA
<ul> <li>up to 690 V for current peak value n=20 rated value</li> </ul>	10.6 kVA
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	2.5 kVA
• up to 400 V for current peak value n=30 rated value	4.4 kVA
• up to 500 V for current peak value n=30 rated value	5.5 kVA
• up to 690 V for current peak value n=30 rated value	7.6 kVA
short-time withstand current in cold operating state up to 40 °C	
<ul> <li>limited to 1 s switching at zero current maximum</li> </ul>	300 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	169 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	128 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 30 s switching at zero current maximum</li> </ul>	92 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 60 s switching at zero current maximum</li> </ul>	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
<ul> <li>at AC-3e maximum</li> </ul>	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	0.8 1.1
• at 60 Hz	0.8 1.1
apparent pick-up power of magnet coil at AC	36 \/A
• at 50 Hz	36 VA

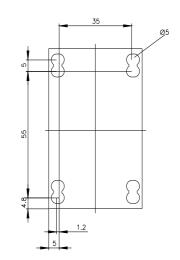
• at 60 Hz	36 VA
inductive power factor with closing power of the coil	
● at 50 Hz	0.8
• at 60 Hz	0.8
apparent holding power of magnet coil at AC	
• at 50 Hz	5.9 VA
• at 60 Hz	5.9 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.24
• at 60 Hz	0.24
closing delay	
• at AC	9 35 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 NC contacts for auxiliary contacts	1
instantaneous contact	
operational current at AC-12 maximum	10 A
operational current at AC-15	
• at 230 V rated value	10 A
<ul> <li>at 400 V rated value</li> </ul>	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
<ul> <li>at 60 V rated value</li> <li>at 110 V rated value</li> </ul>	6 A 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	0.1077
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
<ul> <li>at 220 V rated value</li> </ul>	0.3 A
<ul> <li>at 600 V rated value</li> </ul>	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	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	2 ha
- at 200/208 V rated value	3 hp
- at 220/230 V rated value	5 hp
— at 460/480 V rated value — at 575/600 V rated value	10 hp
contact rating of auxiliary contacts according to UL	10 hp A600 / Q600
Short-circuit protection	
<ul> <li>design of the fuse link</li> <li>for short-circuit protection of the main circuit</li> </ul>	
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)
<ul> <li>for short-circuit protection of the auxiliary switch</li> </ul>	gG: 10 A (500 V, 1 kA)
required	

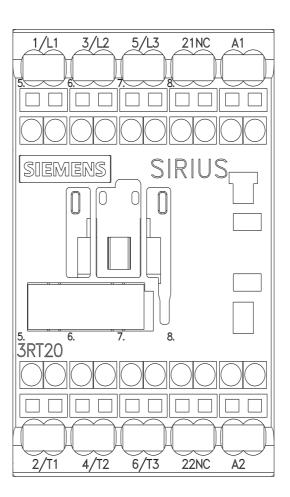
Installation/ mounting/ dimensions			
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted		
	forward and backward by +/- 22.5° on vertical mounting surface		
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN		
	60715		
<ul> <li>side-by-side mounting</li> </ul>	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		
<ul> <li>for grounded parts</li> <li>forwards</li> </ul>	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	spring-loaded terminals		
<ul> <li>for auxiliary and control circuit</li> </ul>	spring-loaded terminals		
<ul> <li>at contactor for auxiliary contacts</li> </ul>	Spring-type terminals		
of magnet coil	Spring-type terminals		
type of connectable conductor cross-sections			
<ul> <li>for main contacts</li> </ul>			
— solid	2x (0.5 4 mm <sup>2</sup> )		
— solid or stranded	2x (0,5 4 mm²)		
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 2.5 mm²)		
<ul> <li>finely stranded without core end processing</li> </ul>	2x (0.5 2.5 mm²)		
<ul> <li>at AWG cables for main contacts</li> </ul>	2x (20 12)		
connectable conductor cross-section for main contacts			
• solid	0.5 4 mm <sup>2</sup>		
• stranded	0.5 4 mm <sup>2</sup>		
finely stranded with core end processing	0.5 2.5 mm <sup>2</sup>		
<ul> <li>finely stranded without core end processing</li> </ul>	0.5 2.5 mm²		
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>		
<ul> <li>finely stranded without 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 4 mm²)		
— finely stranded with core end processing	2x (0.5 2.5 mm <sup>2</sup> )		
— finely stranded without core end processing	2x (0.5 2.5 mm <sup>2</sup> )		
at AWG cables for auxiliary contacts	2x (20 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	Var		
mirror contact according to IEC 60947-4-1	Yes		
B10 value with high demand rate according to SN 31920	1 000 000		
proportion of dangerous failures			

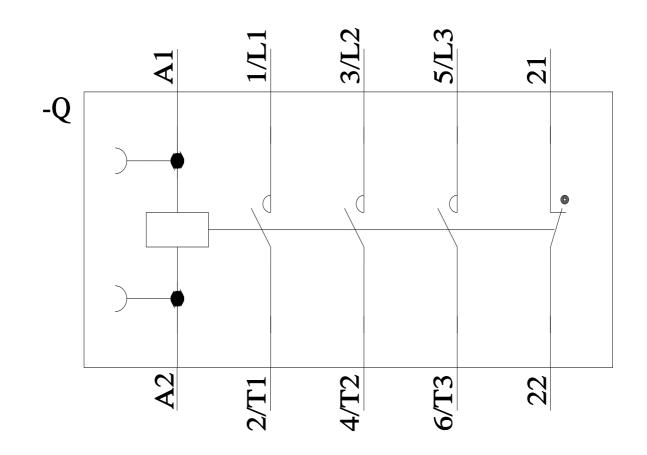
<ul> <li>with low demand rate according to SN 31920</li> <li>with high demand rate according to SN 31920</li> <li>failure rate [FIT] with low demand rate according to SN 31920</li> <li>T1 value for proof test interval or service life according to IEC 61508</li> <li>protection class IP on the front according to IEC 60529</li> <li>touch protection on the front according to IEC 60529</li> </ul>		40 % 73 % 100 FIT 20 y IP20 finger-safe, for vertical contact from the front			
suitability for use			<b>0</b>		
<ul> <li>safety-related s</li> <li>Certificates/ approval</li> </ul>			Yes	_	_
General Product Ap					
	<u>Confirmation</u>		UL 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>	CE EG-Konf.	UK CA	Special Test Certific- ate	<u>Type Test Certific-</u> ates/Test Report
Marine / Shipping					
ABS	BU REAU VERITAS		Lloyd's Register uis	PRS	RINA
Marine / Shipping	other			Railway	
RMRS RMRS	<u>Confirmation</u>		<u>Confirmation</u>	<u>Vibration and Shock</u>	
https://www.siemens. Industry Mall (Online https://mall.industry.si Cax online generato http://support.automa Service&Support (M https://support.industr Image database (pro http://www.automation Characteristic: Tripp https://support.industr Further characterist	e ordering system) iemens.com/mall/en/en r tion.siemens.com/WW/ anuals, Certificates, C y.siemens.com/cs/ww/e oduct images, 2D dime	Catalog/product CAXorder/default characteristics, en/ps/3RT2018-2 ension drawings ax_de.aspx?mlft t, Let-through c en/ps/3RT2018-2 urance, switchi	2mlfb=3RT2018-2AK62 aspx?lang=en&mlfb=3RT20 FAQs,) <u>AK62</u> , 3D models, device circuit =3RT2018-2AK62⟨=en urrent <u>AK62/char</u>		ros,)











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