SIEMENS

Data sheet

3RT2018-2AK61



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<		
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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 %	 during storage 	-55 +80 °C
maximum	relative humidity minimum	10 %
Main circuit		95 %
	Main circuit	

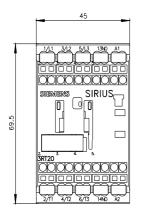
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	
at AC-3 rated value maximum	690 V
at AC-3e rated value maximum	690 V
operational current	00.4
 at AC-1 at 400 V at ambient temperature 40 °C rated value 	22 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C	22 A
rated value	
— up to 690 V at ambient temperature 60 °C	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
 at AC-4 at 400 V rated value 	0.9 A 11.5 A
 at AC-5a up to 690 V rated value 	19.4 A
 at AC-5b up to 400 V rated value 	13.2 A
• at AC-6a	10.27
— up to 230 V for current peak value n=20 rated	9.6 A
value	01071
 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	9.6 A
value	0.07.
 — up to 690 V for current peak value n=20 rated value 	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 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	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

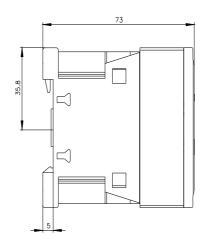
— at 600 V rated value	1 A
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	20 A
— at 110 V rated value	0.15 A
• with 2 current paths in series at DC-3 at DC-5	
— at 24 V rated value	20 A
— at 110 V rated value	0.35 A
• with 3 current paths in series at DC-3 at DC-5	
— at 24 V rated value	20 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	
 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 kVA
 up to 400 V for current peak value n=20 rated value 	6.6 kVA
 up to 500 V for current peak value n=20 rated value 	8.3 kVA
 up to 690 V for current peak value n=20 rated value 	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	
 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-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	0.8 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

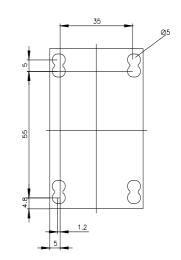
• at 60 Hz	36 VA
inductive power factor with closing power of the coil	
• at 50 Hz	0.8
• at 60 Hz	0.8
apparent holding power of magnet coil at AC	
• at 50 Hz	5.9 VA
• at 60 Hz	5.9 VA
inductive power factor with the holding power of the	
oil ● at 50 Hz	0.24
• at 60 Hz	0.24
closing delay	0.27
• at AC	9 35 ms
opening delay	5 00 mb
• 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	1
instantaneous contact	
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 0.3 A
 at 220 V rated value at 600 V rated value 	0.3 A 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 480 V rated value at 600 V rated value 	14 A 11 A
• at 600 v rated value 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 	gG: 10 A (500 V, 1 kA)
required	

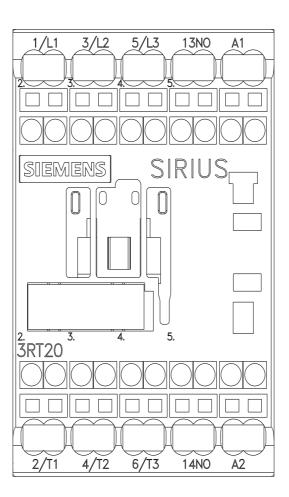
Installation/ mounting/ dimensions	
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted
	forward and backward by +/- 22.5° on vertical mounting surface
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
 side-by-side mounting 	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	10
— forwards	10 mm
— upwards	10 mm
— downwards — at the side	10 mm 6 mm
Connections/ Terminals	6 11111
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 	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 mm²)
 finely stranded with core end processing 	2x (0.5 2.5 mm²)
 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 mm ²
• 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
connectable conductor cross-section for auxiliary contacts	
 solid or 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
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 ²)
— finely stranded without core end processing	2x (0.5 2.5 mm ²)
at AWG cables for auxiliary contacts	2x (20 12)
AWG number as coded connectable conductor cross section	
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
proportion of dangerous failures	

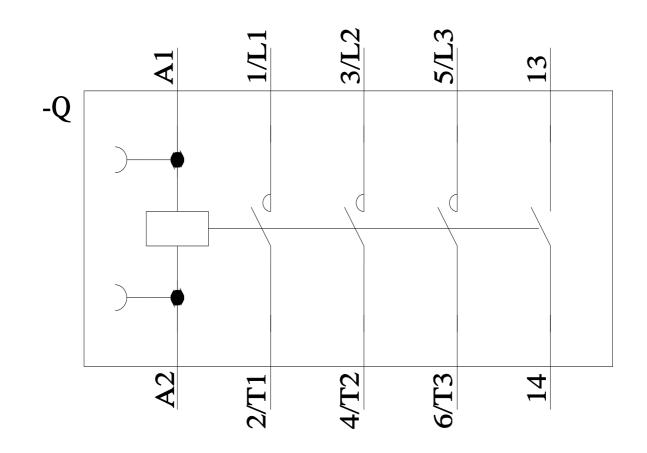
• with high dem failure rate [FIT] wit 31920 T1 value for proof te IEC 61508 protection class IF 60529	als	N 31920 ding to SN according to g to IEC	40 % 73 % 100 FIT 20 y IP20 finger-safe, for vertical cont Yes	act from the front		
CEA		<u>Confirmatic</u>		<u>KC</u>	EAC	
EMC	Functional Safety/Safety of Machinery	Declaration of	of Conformity	Test Certificates		
RCM	<u>Type Examination</u> <u>Certificate</u>	UK CA	CE EG-Konf.	<u>Special Test Certific-</u> <u>ate</u>	<u>Type Test Certific-</u> ates/Test Report	
Marine / Shipping						
ABS	DUREAU VERITAS		Llovd's Register us	PRS	RINA	
Marine / Shipping	other			Railway		
RMRS	<u>Confirmation</u>	DE	<u>Confirmation</u>	Vibration and Shock		
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